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Special Number

WORLD HEALTH ORGANIZATION

EDITORIALS

World Health Organization, *Martha M. Eliot, M.D.* 237
Progress in International Health, *Ada Chree Reid, M.D.* 238

ORIGINAL ARTICLES

Experiences in Mass Treponemal Disease Control Campaigns: a Preliminary Report, *Thorstein Guthe, M.D., M.P.H.* and *Frank W. Reynolds, M.D., M.P.H.* 239
WHO Maternal and Child Health Programme, *Louis Verhoestraete, M.D.* 243
International Problems in Tuberculosis Control, *J. B. McDougall, C.B.E., M.D., F.R.C.P. (Ed), F.R.S.E.* 245
The Eradication of Malaria, *E. J. Pampana, M.D., D.T.M. & H.* 248

SPECIAL ARTICLES

World Health Organization Activities of 1951: Summary of the Annual Report of the Director-General 251
Medical Women in Greece, *Dora Papara, M.D.* 265
A Physician's Sojourn in Puerto Rico, *Margaret M. Wurts, M.D.* 267

AMERICAN MEDICAL WOMEN'S ASSOCIATION

Message from the President, *Evangeline Stenhouse, M.D.* 269
New Members 270
News from the Branches 276

REGULAR FEATURES

Opportunities for Women in Medicine 271
Album of Women in Medicine, Homa Shaibany, M.B.B.S., *Miriam Fahimi, M.D.* 272
News of Women in Medicine 274
These Were the First, *Elizabeth Bass, M.D.* 276
Book Notices 277
Current Publications of Women in Medicine 279

MISCELLANEOUS

International Correspondents 282
Editorial Board ..... Adv. p. 4
Officers of the A.M.W.A. ..... Adv. p. 6
Branch Officers ..... Adv. p. 10
Index to Advertisers ..... Adv. p. 14
Chairmen of Standing Committees ..... Adv. p. 14
Editorial Forecast ..... Adv. p. 17

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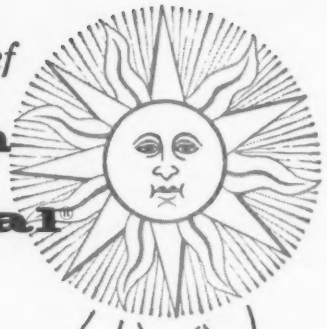

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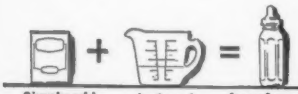

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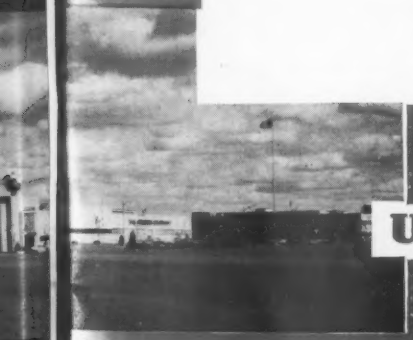

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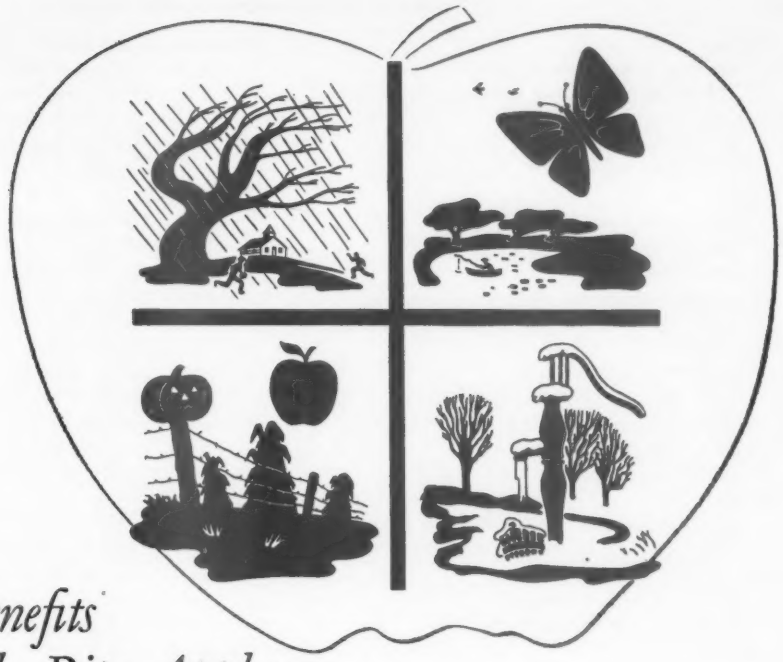

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2. Council on Foods, American Medical Association: Accepted Foods and Their Nutritional Significance. Chicago, American Medical Association, 1939, p. 208.

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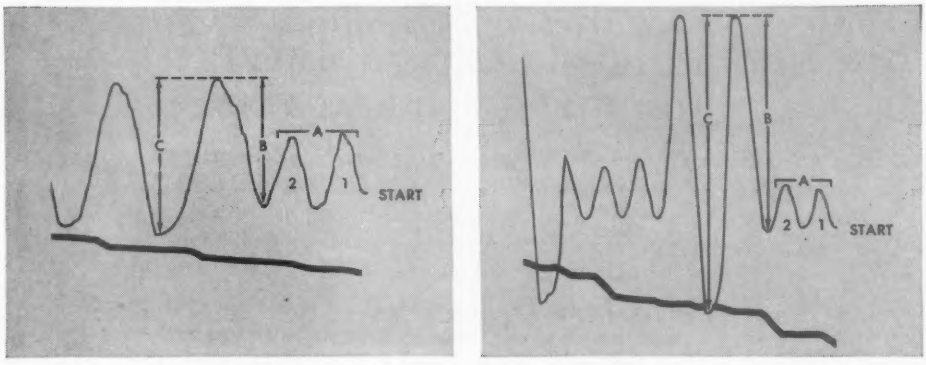

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Schwartz, E., *J.A.M.A.* **147**: 1734–1737. Dec. 29, 1951.

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World Health Organization

As this issue of the JOURNAL goes to press the Fifth World Health Assembly is being held in Geneva. The Director-General's report for the year 1951 will be reviewed and plans and program for 1953 will be adopted. The Executive Board has recommended a modest increase in the budget. Last minute reports from Geneva show that the World Health Assembly adopted this recommendation.

Since 1948, the year of the first Assembly, progress in organization of the WHO headquarters and regional offices has been rapid. The program of work with the member governments has expanded and has been both imaginative and dynamic. Attention is being given to thorough and basic planning before projects are started. Increasingly it is being recognized that this basic planning must involve not only the technical know-how provided by the international experts but also the soundest type of preliminary and continuous social planning, based on an understanding of the culture and customs of the community of people to be served and the most up-to-date concepts of health education as a technique for community health organization. The year by year evaluation of the work of WHO to a great extent will depend upon the skills used in designing the individual projects with a view to such evaluation and upon the development of an adequate public health administrative framework within which the individual projects must take their respective places.

Though the United States is contributing, in accordance with a scale of contributions by member governments, the contribution itself is at present less than three million dollars—about one-third of the budget of WHO. The United States sends a delegation each year to the Assembly. We can take great pride in this international organization and be grateful for the efforts that it is making toward world-wide control of communicable diseases and toward a better understanding of methods by which good human relations and mental health may be fostered. The work that WHO is doing, together with UNICEF, for mothers and children is basic to this understanding.

Recently the National Health Council has formed a National Citizens' Committee for the World Health Organization. This is good because it is imperative that citizens far and wide in this country understand the meaning of WHO and learn how each of us can help in its work.

MARTHA M. ELIOT, M.D.

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Progress in International Health

FOR THE PAST four years the JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION has dedicated its July issue to the World Health Organization. This, the July 1952 edition, perpetuates this tradition. In past years we have emphasized the international health problems to be faced and the plans of WHO for solving those problems. This year we have a different theme. We can now report tangible results achieved in efforts to improve health throughout the world. Articles describing four of the major activities of WHO have been prepared for this number of the JOURNAL by WHO directors of these programs: tuberculosis, treponemal disease, malaria, and maternal and child welfare. The annual report of the Director-General, Dr. Brock Chisholm, to the World Health Assembly, which has been summarized for the JOURNAL, describes programs of WHO around the world and shows that the nation's investment in international health through WHO is slowly beginning to yield dividends. Much has been accomplished in a short time, but much remains to be done.

Healthy Surroundings Make Healthy People was the slogan adopted for this year's World Health Day, recognizing the significance of *environmental sanitation* as a factor in promoting individual and international health. Dr. Chisholm has stated:

> Despite the magnificent progress made by medical science, three out of every four men, women, and children in the world still suffer from diseases spread by unsafe water supplies, unsanitary excreta disposal, uncontrolled insects and rodents, and inadequate protection of milk and other foods. The responsibility for this tragic wastage of human life and energy rests with each of us, individually, in our three-fold capacity as members of the family and of the local community and as citizens of a shrunken world.
>
> Each of us needs to realize that sanitation is, after all, a way of life. Whether we live in a "developed" or an "underdeveloped" country, it is our duty both to ourselves and to our neighbors to practice certain elementary principles of hygiene which can be applied with little, if any, expense by individuals and families. By keeping a clean home, a clean shop, a clean factory, and a clean neighbourhood, we are meeting one of the first requirements for our own health and for a healthy community.
>
> But we must go beyond this; we must also support fully the establishment and development of local and national programmes in community sanitation. They deserve our support because they aim at providing services designed to protect us against the many dangers that may threaten health and life if conditions in our physical environment are unsatisfactory.
>
> Finally, as citizens of a world where all men have become neighbours, we must share with one another the things we learn about promoting health and preventing disease through the techniques available to the modern science of environmental sanitation. Such an exchange of knowledge among all countries is justified on humanitarian grounds as it is essential for reasons of self-interest. The World Health Organization has, from its beginning, given a high priority to international measures for raising standards of environmental sanitation. Along with its other activities, WHO will continue to support and encourage local, national, and international efforts directed towards helping people to achieve a reasonable control of the physical features of their environment.

The JOURNAL welcomes this opportunity "to increase through educational efforts public knowledge concerning the work of the World Health Organization, appreciation of the importance of international health programs, and understanding of the relation of public health issues involved to the General Welfare of the World Community . . ."

For ". . . the health of All peoples is fundamental to the attainment of Peace and Security . . ."

ADA CHREE REID, M.D.

Experiences in Mass Treponemal Disease Control Campaigns

A PRELIMINARY REPORT

Thorstein Guthe, M.D., M.P.H. and Frank W. Reynolds, M.D., M.P.H.

SYPHILIS, TROPICAL FRAMBOESIA, yaws, bejel, pinta, and other closely related microorganisms constitute a group of related infections which are responsible for various acute and chronic pathologic conditions throughout the world. Recent developments have focussed attention on practical advantages of an over-all concept of the treponemal diseases and an increasing number of investigators have recommended a comprehensive world view of treponematoses rather than an approach based on the mode of transmission or relatively minor variations in the resultant clinical syndromes.[1,2,3] Apart from venereally acquired syphilis, which is prevalent to a greater or less extent in all parts of the world, there are a number of important geographic pockets of treponemal infection clinically identical to syphilis but epidemiologically similar to yaws. Among them are the "endemic" syphilis of Bosnia, Yugoslavia,[4,5] Madras, India,[6] Bechuanaland South Africa,[7] and Tahiti in the South Pacific.[8] "Bejel" is also a non-venereal treponemal infection transmitted by direct and indirect contact among children in the Eastern Mediterranean area. Of even greater importance, however, are tropical framboesia and pinta which affect millions of children and adults in tropical and semi-tropical areas—approximately 75 percent of these infections are acquired in childhood and before the age of 18 is reached.

With a view to giving as wide an application as possible to the knowledge so far available on the diagnosis, treatment, and public health aspects of treponemal disease control, the World Health Organization (WHO) has embarked on a programme in support of national health administrations that have requested assistance in the initiation and development of treponemal disease control programmes. The nature of such programmes varies from small clinical and community demonstrations to large scale case finding and mass treatment programmes. Treponematosis control programmes are in operation on a national scale in Haiti, Indonesia, Philippines, Thailand—in the last two years more than four million people have been examined and well over one million cases of treponemal diseases (syphilis and yaws) have been treated with penicillin; a bejel control programme has been established in Iraq; venereal disease control programmes are being carried out in Afghanistan, Burma, Ceylon, Ecuador, Egypt, Greece, India, Italy, Paraguay; there is a well advanced endemic syphilis programme in Yugoslavia. Further programmes will be in operation before the end of the year.

Treatment of treponemal infections in the individual as well as in large population groups has become simplified through the availability of a safe and therapeutic agent—procaine penicillin G in oil with 2 percent aluminum monostearate (PAM). To the individual the effectiveness of penicillin, its freedom from serious by-effects, and the ease of its administration represent a significant advance over previous methods of treatment. At the same time this form of treatment can be readily administered on a mass basis even in less highly developed areas lacking many of the facilities considered essential in other parts of the world. Brighter prospects exist, therefore, for a reduction of the reservoir of infection and, ultimately, perhaps, for the elimination of major foci.

The opinion previously prevalent in academic circles that the ultimate outcome of penicillin therapy would not be known for many years because of the late development of cardiovascular or neurological complications is now on the wane in many parts of the world. Experience has steadily increased since Mahoney and his co-workers first presented

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their preliminary report on the effectiveness of penicillin in early syphilis.[9] There is now considerable evidence available that little neurological involvement is to be expected and there is growing optimism that cardiovascular complications may also prove uncommon. Late systemic manifestations such as occur in venereal syphilis are not part of the pathologic picture in bejel, yaws, and pinta, although exceptions may occur. Insofar as these infections are concerned, therefore, the argument of the "many years" loses its force. Considerable data are now available on the results of penicillin treatment in syphilis—in no other disease have investigations been carried out on such a scale. In the laboratory investigations now being carried out at the WHO International Laboratory Centre, Turner[10] notes that it has not been possible to demonstrate any consistent variations in penicillin sensitivities as between treponemes isolated from active cases of venereal and non-venereal syphilis, yaws, and bejel; they might therefore be expected to respond to treatment in the same general order of magnitude. In arriving at the time-dose relationship applicable to yaws and bejel, deductions have therefore been made from available fundamental studies in syphilis. More and more information is accumulating on the usefulness of penicillin in the treatment of yaws, bejel, and pinta, which appears to confirm the justification of this approach to treponemal diseases as a group.[11-15] It is already possible to appreciate the immediate clinical as well as epidemiological value of penicillin in the large scale treponemal disease control programmes against these diseases.

The determination of the dosage to be used in large scale treatment campaigns is an extremely important one. As penicillin remains one of the most expensive items in a treponematosis control programme, the decision as to the dosage must be a "calculated risk," a compromise between maximum therapeutic efficiency and administrative expediency. The practical effectiveness of the regime recommended by the WHO Expert Committee on Venereal Infections and Treponematoses has been proved in many of the WHO supported treponemal disease control programmes. By way of illustration is the following summary of findings in the pilot areas of the Treponematoses Control Programme in Thailand.

In the Nong Kratom village, Pak Tor District, Rajburi Province, population 2,891, there were 675 cases of yaws (23.3 percent) with 915 lesion types. Treatment schedule consisted of a single injection of PAM as follows: infants up to two years received 300,000 units: children from three to ten years received 600,000 units; those over ten were given 1,200,000 units. The entire population was re-examined at the end of one month and no new cases were discovered; at the end of three months there were two new cases (0.7 percent). The results of therapy are given in the accompanying table.

TABLE I

RESULTS OF THERAPY OF 675 CASES OF YAWS TREATED WITH SINGLE INJECTION OF PAM

Type of lesion	Status at 1 month		Status at 3 months	
	Healed	Improved	Healed	Improved
Early infectious	85.2%	100 %	100 %	100 %
Open ulcerative	55.5%	100 %	88.8%	100 %
Hyperkeratosis	4.3%	64.8%	29.4%	94.9%

It must be stressed, however, that consistently good results with simplified schedules of penicillin require PAM of proven characteristics which maintain effective blood levels for several days with dosages currently employed. The experience of WHO has shown that there are very great differences among PAM preparations, and although these variations may not unduly upset therapeutic efficiency when *multiple injections* are given, they are unsuitable for mass projects, where maximum effort, using a minimum amount of penicillin in one or a few injections at the smallest possible cost is the logical basis for a public health approach. The preparations used in such programmes should, therefore, (a) result in the longest possible effective plasma levels (b) be effective with the smallest possible amount injected and (c) cure a high proportion of infectious cases. Because of the importance of this question in large scale programmes every effort has been made by WHO to see that the penicillin used in mass treponemal disease control programmes conforms to these standards. Numerous samples of PAM produced in different countries by different manufacturers have been analyzed with particular reference to the blood level concentration. Finally, in order to ensure that the results of mass campaigns will not be jeopardized by the use of penicillin preparations, unsuitable for field programmes, WHO has established certain minimum specifications for this preparation. (Appendix)

The approach to mass treponemal disease control by penicillin therapy is one that seeks to reduce the level of infectiousness in a given area to a point where it can be successfully controlled. Mass treatment by itself is not, however, sufficient, and it is obvious that complete examination of the population in a given area cannot often be obtained. Every effort must be made to strengthen the techniques of case-finding by adapting them to the local situation and every possible means used to ensure that as high a percentage as possible of the population in a selected area are medically examined, and infectious cases treated. In the endemic syphilis programme in Bosnia and in the yaws/syphilis pro-

gramme in Haiti, the abortive treatment of contacts has also proved to be an effective epidemiological measure, which helps to shrink the reservoir of infection and so delay the spread of disease in the population generally. No single examination of an area will suffice to control any of the treponemal diseases. The gains obtained with mass treatment must be consolidated to prevent a recrudescence of infection, and to secure those cases which have resulted from either reinfections or relapses, or from those apparently healthy people who were incubating the disease at the time of the first visit. Resurveys should be carried out at intervals of approximately six months, if possible, on a house-to-house basis, so that not merely those previously examined are seen, but the entire population. Provided an effective follow-up mechanism is established to control reinfections, relapses, and the re-introduction of disease, the possibility exists that the incidence of infectiousness can be reduced to a point where permanent facilities will be able to stamp out possible foci before these can spread further.

While the general response of a population group to a planned regimen can be forecast in broad terms on the basis of available knowledge, it is essential to maintain as an integral part of mass campaigns, one or more control groups, whose main task will be to collect more detailed information which will serve as a basis for broader programmes in the same region. It is important for each area and country to be aware of its treponematoses problem; including data on latency and age distribution which can yield information on the mode of infection and the nature of past epidemics. Populations of different ethnologic origin, nutrition, body build, and environment in general may respond differently to penicillin treatment. Serologic tests best suited for application in a particular area should be determined in correlation to clinical diagnosis, as a basis for treatment control by quantitative tests, six, twelve or more months following treatment. The data collected by control groups on aspects such as the above will provide information on which more extensive programmes can be planned. It may not always be possible to apply systematically the scientific refinements in pilot areas for lack of facilities but the cross section of information obtained in such areas will be a fair indication of what is happening to individuals in the broader mass programme.

More and more stress is being laid on the above aspects by treponemal disease control teams working in different parts of the world. In its future work WHO will be guided by these observations and the results of mass treponemal disease control programmes will be improved.

CONCLUSIONS

1. Recent advances, particularly the developments in penicillin therapy have simplified the carrying out of mass treponemal disease control programmes.
2. Repository penicillin preparations of the PAM type used in mass treponemal disease control programmes should conform to minimum specifications. Such specifications have been established by WHO.
3. Mass treatment alone is not enough — case finding techniques should be strengthened in order to ensure that as high a percentage as possible of the population is examined. The gains obtained should be consolidated by resurveys at intervals of approximately six months, when not only the original cases but the entire population should be re-examined.
4. Primary control areas should be established with a view to collecting information which will serve as a basis for broader programmes.

APPENDIX

WHO SPECIFICATIONS FOR PENICILLIN PROCAINE G IN OIL WITH ALUMINUM MONOSTEARATE

Description

Penicillin, procaine G in oil with 2 percent aluminum monostearate, 300,000 units per cc., 10 cc. per vial. The successful vendor will be required to provide for each lot of procaine penicillin in oil supplied, copies of protocols of tests made by the manufacturer and copies of data on tests made by authorized government authorities.

Specifications

1. Procaine penicillin G. The procaine penicillin G used in compounding must conform to the requirements given in the attached Schedules 1 and 2 for potency, moisture, sterility, toxicity, pyrogenicity, pH, crystallinity, and penicillin G content, et cetera. In addition, the particle size of the powder must be such that the compounded oil product meets the requirement of specification 2b below.

2. Procaine penicillin G in oil with 2 percent w/v aluminum monostearate.

(a) Potency, sterility, moisture and packaging. Must conform to the requirements given in the attached Schedule 2.

(b) Penicillin particle size. At least 65 percent of the particles must be 5 microns or less as determined by microscopic chamber counts.

(c) Stability. The product should represent a stable emulsion. When shaken by hand it should produce an emulsion stable for 48 hours at a temperature of 37° C; if a layer of oil separates it should not exceed 3mm.

(d) Vial content. Actual content of a 10 cc. vial must be such as to permit the withdrawal of 10 one-cc. doses from the vial, using ten different Luer Lok syringes and ten different needles, 18 gauge.

(e) Syringeability. The product must be readily withdrawable and injectable through an 18 gauge needle.

(f) Blood concentration. The injection of one ml. (300,000 units) intramuscularly into humans, should maintain a penicillin blood concentration of not less than 0.03 unit/ml. for 72 hours after injection in the majority of subjects (Sarcina Lutea technique).

SCHEDULE I

Requirements for:

Potency, moisture, sterility, toxicity, pyrogenicity, pH, crystallinity, and penicillin G content of procaine pencillin G used in compounding procaine penicillin G in oil with 2 percent aluminum monostearate.

1. Procaine penicillin G is procaine penicillin which contains not less than 85 percent by weight of the procaine salt of penicillin G.
2. Potency of procaine penicillin G must not be less than 900 units per milligram.
3. Procaine penicillin G must be (a) sterile, (b) non-pyrogenic, (c) non-toxic according to test procedures acceptable to authorized government authorities.
4. Moisture content of procaine penicillin G must not exceed 4.2 percent.
5. The pH of saturated aqueous solution of procaine penicillin G must not be less than 5 and not more than 7.5.
6. Procaine penicillin G must be crystalline as revealed by examination, when mounted in mineral oil, by means of a polarizing microscope and using criteria acceptable to recognized Government authorities.

SCHEDULE II

Requirements for:

Potency, sterility, moisture, and packaging of procaine penicillin G in oil with 2 percent aluminum monostearate.

1. Procaine penicillin in oil with 2 percent aluminum monostearate is a suspension of procaine penicillin G in refined peanut oil or sesame oil compounded with 2 percent w/v aluminum monostearate to give a stable emulsion with or without the addition of suitable and harmless dispersing agents. The sesame oil or peanut oil used must conform to the standards of recognized Government authorities.
2. The potency must be 300,000 units per millilitre, as determined by assay methods acceptable to recognized Government authorities.
3. It must be sterile as determined by methods recognized by Government authorities.
4. The moisture content must not exceed 1.4 percent.
5. Packaging. The immediate container shall be of colourless transparent glass so closed as to be a tight container as defined by recognized Government authorities. It shall be sterile at the time of filling and closing and sealed in such a way that its contents cannot be used without destroying the seal. The composition of the container must be such as will not cause any change in the strength, quality or purity of the contents beyond variations acceptable to recognized Government authorities for good practice.

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WHO Maternal and Child Health Programme

Louis Verhoestraete, M.D.

THE PROMOTION OF maternal and child health is one of the specific functions of WHO as laid down in its Constitution. A global view of the task cannot fail to draw attention to some of the many problems which, although not restricted to the field of maternal and child health, are yet of vital importance to the health of the individual. Millions of the world's population exist in unsanitary living conditions, scourged by diseases such as malaria, cholera, tuberculosis, and venereal infection, and, in certain areas, suffer from severe malnutrition bordering on starvation. It is obvious then that where these vast health problems exist, an isolated programme of services for mothers and children is not sufficient in itself to meet their needs, but such services ought to be provided as an integral part of the general public health services to the community. In some areas, however, although this broad objective remains unchanged, it has been necessary to begin with projects in a specialized field such as malaria control by DDT spraying, yaws eradication, or nutrition and food production, which will provide rapid, extensive, and easily recognized improvements in the health of the population. In this respect most of the WHO programmes will have a bearing on maternal and child health.

In order to make expert advice available to governments who wish to build up their services for mothers and children, and to assist in planning regional programmes for maternal and child health, a maternal and child health adviser is attached to each regional office of WHO. Broadly speaking, WHO activities in the field of maternal and child health may be considered under three headings:

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1. *Field Projects and Consultant Services.*

Upon the request of governments, assistance is given in countries where, for one reason or another, large scale development of national maternal and child health services has not yet been possible. Most of the WHO maternal and child health field programmes developed in the regions of Southeast Asia, Eastern Mediterranean, Western Pacific, and in South America have been worked out as joint WHO/UNICEF demonstration and training projects, for which UNICEF provides the supplies and equipment necessary for the initiation and development of the project.

A team of international personnel recruited by WHO is attached to the project in an advisory capacity; such a team is usually made up of one maternal and child health medical officer and one or more public health nurse-tutors and midwife-tutors. The government of the country agrees to provide national or local matching staff, who, with the co-operation and guidance of the international team, gradually assume responsibility for the project. This appears to be the best way of ensuring that the work will go on after the withdrawal of the international team envisaged, in most instances, after a period of two years.

A suitable centre is selected within a prescribed area, which may be urban or rural, and within this area pre- and post-natal clinics, child health centres, and school health services are developed. Every effort is made at the same time to provide improved clinical services such as more adequate obstetric and pediatric clinics and thus to link the preventive and curative aspects of health work.

As well as demonstrating sound maternal and child health practices, the centre also serves for the training of nurses, public health nurses, midwives and auxiliary nursing personnel, and for medical students, and provides field training for schools of public health. In rural areas the need for training more nurses is obviously of the greatest importance.

WHO maternal and child health programmes of this type have already been started in Najafgarh, a

rural area near New Delhi, India; Manila, Philippine Islands; Lahore and Peshawar, Pakistan; Kabul, Afghanistan; Rangoon, Burma; Bangkok, Thailand; Djakarta, Indonesia; Cambodia; Beirut, Lebanon; and in Brazil, Colombia, Chile, Paraguay, and Peru. During 1952 it is planned to initiate further projects in Pakistan, Hong Kong, Viet Nam, Ceylon, Syria, Jordan, Turkey, Iran, and in Ecuador, El Salvador, and Panama.

Another more specialized joint programme carried out with UNICEF was one concerned with the care of premature infants in France, Finland, Italy, and Yugoslavia. For this purpose WHO appointed a special consultant on prematurity who advised the regional office for Europe and visited some of the countries concerned to help to develop the programme.

In collaboration with the United Nations and UNICEF, special programmes for the rehabilitation of physically handicapped children were organized in ten European countries, and a WHO/UN consultant was made available to prepare plans for their operation.

It is anticipated that consultants in both these specialized fields will visit Japan during 1952 and a consultant is also to visit Lebanon to discuss plans for a programme for the rehabilitation of physically handicapped children.

2. *Education and Training of Professional Personnel.*

In addition to the field training already mentioned, it has been found valuable in many instances to offer WHO fellowships to selected professional workers in the countries where these maternal and child health programmes are being carried out; so far a total of 153 have been awarded, including 42 short-term fellowships during the past year for attendance at group-training courses in Paris (organized by the International Children's Centre), in Zurich, and in London; the last named, a course in rehabilitation and after-care of physically handicapped children, was suggested by WHO, and organized jointly by UN, WHO, and UNICEF.

At the All-India Institute of Hygiene and Public Health in Calcutta WHO and UNICEF are assisting in the development of the maternal and child health, health education, and nutrition departments. During 1952 it is planned to provide additional international teaching staff, one of whom will be a lecturer in maternal and child health, for the University of Malay School of Public Health at Singapore.

Eventually it is envisaged that similar centres may be built up in the Eastern Mediterranean and Latin American areas, and that they will serve as regional training centres where the organization of health services appropriate to the different cultural patterns may be demonstrated.

3. *Expert Committees and Headquarters Activities.*

The Maternal and Child Health Section at Headquarters Office in Geneva is largely concerned with the co-ordination of all field work being carried on in the regions, and with the recruitment of medical personnel for field projects and of short-term consultants. The Section keeps in close touch with the regional maternal and child health advisers and is available to give technical assistance if required. The Section is also responsible for arranging for the meeting of Expert Committees.

In 1949 the first WHO Expert Committee on Maternal and Child Health was convened in Geneva. Since then, the reports of the Expert Group on Prematurity and the Expert Committee on School Health Services, both of which met in 1950, have been published. In November 1951, an Expert Committee on Maternity Care, whose report is shortly to be published, met to consider the basic principles for the organization and structure of maternity services. An Expert Committee on the Physically Handicapped Child followed in December 1951; this was the first WHO Expert Committee to be convened in a joint meeting with the UN and interested specialized agencies, UNESCO and ILO.

During 1952 it is proposed to hold a joint UN/WHO Expert Committee on the problem of adoption, and in 1953 an Expert Committee on the pre-school child, and another, jointly with UN and UNESCO, on the mentally defective child.

In order to meet all the requirements for the full development of children, close integration of health, educational, social, and vocational services is necessary. This need for co-ordination of services at the national and international level is becoming more and more evident. In view of this, during 1951 the United Nations established an Ad Hoc Working Party on Long-Range Activities for Children. This working party is composed of representatives from UN, UNICEF, ILO, UNESCO, FAO, and WHO. The first meeting of the working party resulted in a plan to demonstrate in three different countries in Asia, the Middle East, and Latin America, respectively, better integration of the assistance to be given by the different agencies in programmes for children, hoping, at the same time, to promote the same co-ordination of services for children at the national level in these countries. The United Nations family is thus demonstrating its efforts to work more closely for the benefit of children.

International Problems in Tuberculosis Control

J. B. McDougall, C.B.E., M.D., F.R.C.P. (Ed), F.R.S.E.

DURING THE PAST DECADE greater advances have been made in the diagnosis and treatment of tuberculosis than in any other period of medical history. The advent of mass chest roentgenography and other forms of survey have revealed thousands of patients previously unknown among the general and presumably healthy populations in many countries in the world. Fortunately, most of these have been found to have tuberculosis of the lungs in the early and eminently curable forms. It is true that these surveys have resulted in a larger load of cases with which authorities have had to deal, with the result that morbidity figures may have increased in many localities due to these new discoveries. On the other hand, evidence is available in plenty to show that death rates have diminished in all countries from which reliable data can be procured. Where death rates of 150 per 100,000 of the population were common some twenty years ago, reductions to one-fourth or one-fifth of these figures have been recorded in a number of countries.*

Side by side with improved methods of case-finding, the strides made in the actual treatment of pulmonary tuberculosis by drugs and improved surgical services have been impressive. Some six years ago streptomycin was announced as a new remedy, and despite its many drawbacks, this antibiotic still remains the sheet-anchor of treatment in many forms of tuberculosis, and in none more than the acute forms of the disease. The dramatic results obtained in the treatment of tuberculous meningitis and miliary tuberculosis, in particular, have astounded those who are familiar with the devastating results which followed these forms of tuberculosis prior to the advent of antibiotics. In the pulmonary forms of the reinfection type of tuberculosis, results have been less convincing, though the combination of streptomycin with drugs such as para-amino-salicylic acid (PAS) has mitigated many of the awkward complications which result from the administration of streptomycin alone. Especially is this true with regard to the toxic effects of the antibiotic on the eighth nerve and the emergence of resistant tubercle bacilli. At this writing, new compounds of isonicotinic acid hydrazide give promise of further advances in the chemotherapy of tuberculosis. Almost monthly we are witnessing new and rapid strides also in thoracic surgery, for whereas some twenty years ago segmental resection and pulmonectomy were considered hazardous operations, they are now almost the daily routine of every up-to-date chest hospital. Here again, chemotherapy has come to the aid of the surgeon and has made it possible for him to be freed of many anxieties which formerly followed in the train of surgical interference with the lung tissue.

These points are mentioned quite briefly, since they have become highly developed during the lifetime of the World Health Organization and have gone far towards moulding the policy of WHO in advising governments in many parts of the world in the planning of tuberculosis projects.

Policy of WHO in Tuberculosis Control

In the lists of communicable diseases, tuberculosis has taken a high priority in the deliberations of the Executive Board and Assembly of WHO.

Briefly speaking, there are two principal functions for the Tuberculosis Section of WHO to perform. First, there is that function which is conducted at Headquarters in Geneva, which concerns questions of general policy. The collection of epidemiological and other data from as many countries in the world as possible; the distribution to all Regions of WHO of relevant information on matters of current interest and importance; assembling of records and keeping notes of progress of all field projects, and the convening of meetings of Expert Committees — all these fall within the scope of Headquarters to perform.

Second, there is the field work of WHO which is made possible from the regular funds of the Organization, as well as from monies transferred from the Expanded Programme for Technical Assistance. Sometimes the United Nations International Chil-

*Epidemiol. & Vital Statist. Rep. 3: 10, Oct. '50.

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dren's Emergency Fund also contributes to schemes, especially for BCG vaccination. The general procedure is for countries to present their requests for assistance in any chosen subject to the Directors of the Region in which the country is situated, and for the Regional Advisers to discuss details with the officials of the countries concerned, prior to the project receiving official approval from the parent bodies. These plans of operations are gone into very thoroughly by experts of WHO, and the contributions of the Organization and of the Government are clearly laid down in an agreement signed by both parties.

In the case of tuberculosis control, a project may take the form of assistance in any one phase of tuberculosis, such as a centre for the demonstration and training of thoracic surgery, or in the provision of a lecturer for a period of one or two years to a country endeavouring to build up a nucleus of tuberculosis experts. More usually, however, the request is for a complete demonstration and training project covering all aspects of tuberculosis control.

Such a centre includes provision for teaching and training in prevention, diagnosis, and treatment. Equipment and supplies include, as a rule, general dispensary utensils, laboratory supplies for the direct and indirect examination of tubercle bacilli, and for roentgen examination, using both static and mobile apparatus. In addition, it is customary to send imported personnel including a doctor, public health nurse, laboratory technician, x-ray technician, and any other specialist who may be required. The requesting Government supplies buildings, office furniture, and the other usual office perquisites. As a rule, lodging expenses for imported personnel are also met by the receiving Government.

The more precise nature of the supplies and equipment dispatched to a country for an antituberculosis programme depends largely on the existing resources in the country itself. No two countries are in a similar stage of development so far as their schemes for tuberculosis control are concerned, and it has been the custom for WHO to give assistance only to those countries in greatest need. The funds available for such assistance in tuberculosis alone in 1952 come to approximately two million dollars which is, after all, a very small contribution to the requirements of all countries in need of assistance.

It has just been said that the needs of countries differ. There are, for example, certain countries where the need is almost entirely for supplies and not for imported personnel. Local personnel in these countries are already familiar with the theoretical and practical aspects of the work of tuberculosis control, but are handicapped in its execution by lack of essential supplies. In other countries the need is for both personnel and supplies, and it has to be admitted that for a minority of countries the outstanding need is not for supplies in the first instance, but for the introduction of personnel capable of setting up the necessary elementary administrative mechanism which is the basis on which all successful schemes are founded. It has been the experience of WHO observers in many countries that, whilst clinical procedures are usually well known and capably practiced by many first-class physicians, yet the central office functions and peripheral control are often defective.

Demonstration and training centres of the type just outlined are now in operation in Burma, Ecuador, El Salvador, India, Pakistan, Thailand, and Turkey, and are to be started during 1952 and 1953 in Egypt and Greece, and other centres in Ethiopia, India, Indonesia, Iran, Iraq, Israel, and Syria.

The World Health Organization is under no delusions as to what can and what cannot be accomplished by such demonstration and training centres. In themselves, they are not, for obvious reasons, likely to make any immediate important contribution to the morbidity or mortality rates from tuberculosis in these countries. It is probable that their real value lies in the purely demonstration and training functions they are called upon to perform, for the more complete the training and the larger the number of local personnel trained, so is a country-wide scheme for tuberculosis control more likely to develop in the end.

Fundamental Principles

In its advice to governments seeking assistance, WHO has adhered to certain definite principles which are common to all Regions. Some of these principles are as follows:

(a) As much information as possible must be obtained as to the epidemiology of the disease in a country before active operations begin at all;

(b) The nucleus of an administrative staff must be set up by the Government, and this nucleus must be led by a physician who is experienced in both the administrative and clinical aspects of tuberculosis control;

(c) Next, it is necessary to consider training facilities for clinicians who will be in charge of dispensaries and other institutions in which patients are to be properly diagnosed and treated. This may be done at the first central dispensary to be established, or by means of fellowships for the more senior members of the staff who will later be employed by the Government in the antituberculosis campaign. From the central dispensary training is given to home visitors, nurses,

laboratory and x-ray technicians, as well as to doctors who propose to make tuberculosis their speciality;

(d) Special attention is given to contact work and to the vaccination by BCG of negative reactors, particularly those living in contact with known infectious cases;

(e) It is definitely not the policy of the World Health Organization to encourage countries to spend large sums of money on expensive new buildings for the treatment of tuberculosis when there are other and more important aspects of the campaign to be developed. Treatment in sanatoria and hospitals is certainly desirable for many cases, but it is quite beyond the resources of all but a very few countries in the world to meet new capital expenditure and the maintenance which is necessary for the provision of up-to-date institutional accommodation. Besides, large numbers of patients can now be satisfactorily treated at or from the dispensaries. A document has recently been published by WHO on the provision of inexpensive buildings in the treatment of tuberculosis, and there is evidence that many countries are now investigating the possibility of meeting their obligations *qua* institutional treatment by providing buildings of this type in preference to the designs which cost five or even ten times more in capital expenditure.

There is a strong and growing feeling that new methods are now desirable in the approach to the problem of tuberculosis eradication, especially in countries in which a sound control programme has already been established. If the incidence of tuberculosis in any country is examined on the basis of deaths, sickness, or even infection, it will be found that no matter how low the mortality or morbidity rates may be, there are always certain areas within the country which lag behind other areas. Examples of this can be given in plenty, and it requires only an appropriately shaded map of any country, with the provinces or states clearly denoted in accordance with the severity of tuberculosis mortality rates, to demonstrate the areas within the country where special efforts are necessary to clear up the black spots. This technique within a country should be somewhat similar to that which WHO has adopted for countries throughout the world. As has been said, WHO has endeavoured to concentrate its limited resources on countries which are in greatest need, and it would appear logical and scientific for countries themselves to concentrate their available resources in those areas within the countries which are likewise in greatest need. This question has been expanded in some detail by the present author in another communication about to be published in the Bulletin of the World Health Organization, but the principle is merely mentioned here as being one which is essential for the thorough control of the disease in any, even the most advanced, countries.

WHO—An Advisory Body

Finally, it should be made clear that it is not the function of WHO to take over any of the public health services of a country and to administer them. WHO is essentially an advisory body, invited by governments to participate in the development of the weaker links in the public health chain, and to stimulate administrative and clinical action by the provision of experienced personnel recruited for work in countries. Even within these relatively limited terms of reference, the difficulties are often enormous, for the mixing of nationalities is not always conducive to complete mutual understanding, and language problems are frequently in evidence. Add to this the geographic intricacies in getting supplies and equipment to distant and often remote countries, with currency, customs, and other barriers to be overcome. For the countries themselves, there is always the further task of matching international personnel and providing adequate salaries for these workers in what is often a new venture in public health work. Only too often these salaries are inadequate to guarantee full-time employment of local personnel and, as a consequence, private practice has to intervene if the doctors are to receive remuneration sufficient to meet their everyday requirements. Nevertheless, from many places there is already evidence that international tuberculosis workers are welcomed in foreign lands, and that governments appreciate the type of tuberculosis services which have been recommended for their adoption by the Expert Committee on Tuberculosis to WHO.

As a stimulus to all who are engaged in this work is the knowledge that there are signs of reducing death rates and lessening sickness in many places. The newer methods in treatment referred to at the outset of this note will no doubt lead to further advances with the passing of time. In no branch of public health is there more hope for conquest than in the tuberculosis field.

The Eradication of Malaria

E. J. Pampana, M.D., D.T.M. & H.

WE WHO ARE LIVING TODAY are witnessing epoch-making events. Some of these events may prove happy, some of them may well prove unhappy and even lethal for the future of mankind. Among the happy ones should be included the elimination of some major communicable diseases. We are actually witnessing the gradual eradication of malaria and some countries, which have always been known as malarious, no longer count malaria among their public health problems.

It was the great Koch in Germany who believed that malaria transmission could be effectively controlled by attacking the sources of infection with the only antimalarial drug which was known at his time, quinine. Trials were made, and they failed. Also when synthetic antimalarials were used, many years after Koch's death, it was concluded that malaria control could not be achieved by drugs. We can today control and eradicate treponematoses, because we have antibiotics which in one or two doses can render non-infective a great majority of the sources of infection. There is no such drug yet for malaria, in spite of the enormous progress made recently in the chemotherapy of malaria. We can "suppress" malaria in the individual or in a well controlled community; but as malaria is a rural disease, it would be a tremendous job to organize and carry out suppressive prophylaxis in all the rural communities. As a measure of public health administration, drug administration is not practicable to control malaria. It is at the mosquito vector, and not at the reservoir of infection or at the subject at risk, that we must aim. Even ten years ago, there was already general agreement that such warfare against the mosquito should chiefly mean warfare against its aquatic stage; and in order to make this antilarval campaign more purposeful, efficient, and economical, it had been the habit to concentrate the attack only on the species of anopheles which were recognized vectors in the locality ("species sanitation"). In some regions however, instead of antilarval measures, destruction of adult mosquitos indoors had been resorted to, with good results. But this "flitting" or, as we would call it today, "space spraying" had to be repeated several times a week; it became a popular measure in South Africa, was applied on a restricted basis in India, but did not become the standard tactics for anopheles control, which remained still antilarval. Today everybody knows that contact insecticides, having residual action, such as DDT or BHC or others, sprayed on the inside walls of the houses, occupy the first place in malaria control. These are today the tactics of choice. Public health administrations are able at least to apply an efficient and economical method to solve the whole problem of malaria in their country: because this method can be carried out easily, at low cost, and can cover all the houses to the protection of whose inhabitants it must be applied. Antilarval measures were not only much more expensive, but their application was much more difficult, because finding and treating every week or every ten days all potential breeding places was a much more serious problem than finding and spraying all the houses. Moreover the population appreciates the sprayings for their immediate destruction of most domestic insects, but it does not appreciate antilarval measures. This explains why in many countries, nation-wide programmes were made soon after residual action insecticides were found, and how eventually malaria ceased to be a public health problem' not only in the United States of America, but in many South American countries such as the Argentine, Brazil, and Venezuela. One of the first countries to eradicate malaria was British Guiana, where residual DDT spraying not only eliminated malaria, but eradicated as well *Anopheles darlingi*, the chief vector, and, at the same time *Aëdes aegypti*. In Europe, country-wide control schemes have been implemented in Greece, Italy, and Yugoslavia; as regards Africa, in Madagascar, Mauritius, and Transvaal; in Asia, Ceylon has been able to control malaria practically all over the island; much is being done in India, and Thailand expects to carry out a five year plan which will lead to the control of all important malarious areas.

It should first be pointed out that "malaria control" or even "malaria eradication" does not mean

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"anopheles eradication." If we are aiming at controlling malaria by residual insecticides, we should not care about the density of anopheles that remains; what matters is that transmission is interrupted by killing all the mosquitoes that will bite or have bitten man. Certainly we know that some vector species also disappear after repeated DDT campaigns, as it has happened most clearly in British Guiana, and this is a very welcome phenomenon indeed; but we should not, as some people still do, assess the results of a malaria control campaign by residual insecticides on the basis of the anopheline density. Admitted therefore that we are looking for malaria control, and that every public health administration is supposed to spend its funds in a rational way, we should know, before planning a campaign, where and how much malaria there is. This is obviously an epidemiological problem that can be solved by certain investigations carried out by personnel trained in these methods. There is now, on account of the success with which malaria has been controlled in many countries, a tendency to believe that in order to fight malaria, prior epidemiological investigations are superfluous and that all we have to do is to organize spraying squads and let them loose to fight the mosquitoes. This may indeed be right in areas where this method has been found to give good results; but it might be wrong in others.

Malariousness is not a geographical expression, but a topographical one. A province can well be classified as malarious, but epidemiological surveys will very often show that some or many agglomerations therein are not malarious at all. We have seen ourselves, during a DDT campaign, a large village being sprayed which, on the basis of the examination of the children that we could carry out during our visit, was not malarious, and therefore did not need any DDT. No wonder that the *per capita* cost of this particular campaign was unduly high. In order to obtain the greatest lasting efficacy of a DDT or BHC campaign, it is logical to think that the spraying operations should be completed as soon as possible immediately before the beginning of the transmission period, because in this way as much as possible of the residual toxicity of the DDT will be exploited. But to ascertain this period does require careful laboratory investigations; clinical examinations will be of great assistance and only a medical man, properly trained, could do it satisfactorily. Further, if we say that malaria can be controlled by two sprayings a year, at a dosage of 200 mg. of DDT per sq. ft., it may well occur that by an experimental approach to the problem, the malariologist may find that the same degree of control could be obtained by a single spraying a year, at a dose of 150 mg. which would mean a saving of not less than 60 percent. We must not forget, of course, that a malariologist is a medical man, who has been well trained in malariology and in mosquito entomology and who has a working knowledge of malaria engineering plus, today, a good training in vector control by residual insecticides. The day may come when a country, which succeeded in controlling malaria, cannot get any more insecticide, or is forced, for financial reasons, to employ smaller amounts; then a good knowledge of malaria epidemiology in the country may indicate the rational means of achieving this economy, as has recently happened in British Guiana.[2]

It is believed therefore, that in starting an antimalaria campaign in a new country, a preliminary trial should first be carefully undertaken.[3] This is the view of the Expert Committee on Malaria of WHO. It is also their view that when WHO sends malaria control demonstration teams to a requesting country, such teams should comprise at least a malariologist and an entomologist.[4] WHO has adopted this practice; and three years' experience in different parts of the world have proven the soundness of the judgment of the Committee. Upon request of the Governments, WHO has sent malaria control demonstration units—or advisory units—often in collaboration with UNICEF, to Afghanistan, Burma, Cambodia, India, Indonesia, Iran, Lebanon, Pakistan, Philippines, Thailand, and Viet Nam, without considering other forms of assistance in the field of malaria control, as it is occurring in Africa and in Latin America. The final measure of the success of their enterprises is not so much the success of the project (i.e. achievement of malaria control, finding the most rational and economical method to achieve it, satisfactory training of the local personnel), but chiefly the extension of the operations, after WHO's assistance has been withdrawn; extension which, in the best instances, would lead to a nation-wide scheme of malaria control and eventual malaria eradication.

Are these tactics, even in the hands of a good malariologist, applicable to every malarious country? It is too early to reply. It may be that malaria carried by *A. lewcosphyrus* in Borneo, or by *A. minimus flavirostris* in the Philippines—species that apparently do not rest on the inside walls of houses long enough—may not be controlled by DDT. Experiments by Smith and Dy,[5] in the Philippines, would indicate failure, but a final answer is still lacking. And then, should DDT fail, other insecticides might succeed. Entomological observations and deductions may be misleading; we were inclined to believe that the malaria of Southern Brazil transmitted by anophelines of the *Kerteszia* subspecies, which were known to bite outdoors no less than in-

doors, could not be controlled by DDT; and the first experiments by Bustamante and Ferreira proved the contrary.[6] This supports the recommendation of the WHO Expert Committee on Malaria on the advisability of carrying out pilot projects of malaria control "where previous work leaves the matter of control by this [residual] method open to reasonable doubt."[3]

Before the discovery of the present tactics, malaria control was just one of the services of many health administrations; the fight against malaria was just one of the many battles that the health administration had to carry out. When the present tactics of residual insecticides were discovered, the strategical approach changed: many nations devoted to malaria control efforts of a considerably larger magnitude than they would to other purposes, because they had confidence that in so doing, they would defeat this particular enemy. There was at last a method which promised to eliminate quickly one of the major problems of public health. It seemed worthwhile to put most of the strength into one battle, which promised to be a winning battle. Thus it was possible to eradicate malaria (not the anopheles, of course) from many countries. Furthermore, as a rural disease and a disease of the communities, malaria reduced the working capacities of the workers in the field, generally during the season when all the family is called to work; thus, by controlling malaria, an increase in food production might follow. It was the strategy of a commander in chief who suddenly realizes that he has the best chance to annihilate one of the opposing armies, and precisely that which has the greatest stocks of food.

The difficulty comes when victory has been achieved and it is necessary, year after year, to carry on the campaign. It will be just as costly, and it will be difficult to secure the necessary credits for malaria control, once malaria has been eradicated. But we may hope that repetition of the sprayings *ad infinitum* may not be necessary. A thorough knowledge of the local malaria epidemiology has recently allowed Dr. Giglioli[2] to cease DDT spraying in all the coastal area of British Guiana, limiting it to the potential gates of entry of the vector mosquitoes, *A. darlingi*, from the interior. We might add that in 1951 Greece stopped systematic DDT spraying in the Peloponnesus and in Crete, replacing the spraying by a close epidemiological and clinical supervision—and malaria did not return. At any rate, this much can be said: the danger of interrupting residual insecticides campaign is the smaller, the larger is the area controlled. Nation-wide malaria control leading to national malaria eradication has been a great step forward, for in the countries which have succeeded in doing it, human sources of infection are practically no longer existing—unless they are imported from abroad. Continent-wide malaria control should be the next step in the strategy against malaria. And to reach the final goal—the eradication of malaria as public health problem from the world—we may conceive that malaria occupies a position similar to that occupied today by yellow fever, which is absent even from territories where *Aëdes aegypti* is present, because no reservoirs of infection exist. They do exist in the jungle; for malaria, the time will come when the remaining sources of infection will be only in the remotest, inaccessible villages in the interior of the great continents. The danger will be limited to two groups: to people going to those villages, and who, on their return, should be submitted to "surveillance" and chemoprophylaxis; and to the residents, probably very few, of those villages who travel to surrounding areas no longer malarious. This danger could of course be met by continuing the house-spraying in strategical points around the infected area.

For the time being, as we have indicated, continent-wide planning is the goal. After three years of interrupted malaria transmission, the population will be no longer infective to mosquitoes (except perhaps for individuals, always very rare, suffering from *Plasmodium malariae* infections). If that happens over a whole continent, with the possible exception of the most remote and inaccessible villages, even if anopheles will eventually become resistant to the insecticide, or if the insecticide campaign can no longer be continued, it will not be too difficult for health administrations to devise a proper defensive against the return of malaria.

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World Health Organization Activities of 1951

SUMMARY FROM THE ANNUAL REPORT OF THE DIRECTOR-GENERAL

According to the World Health Organization (WHO) Constitution, the first function of WHO is "to act as the directing and co-ordinating authority on international health work." This important task is carried out mainly through activities at Headquarters. About 30 advisory panels of experts have been created to provide WHO with the latest technical information on health matters including antibiotics, biological standardization, brucellosis, cholera, drugs liable to produce addiction, environmental sanitation, health education of medical and auxiliary personnel; public secticides, international epidemiology and quarantine, international pharmacopoeia, leprosy, malaria, maternal and child health, mental health, nursing, nutrition, parasitic diseases, plague, professional and technical education of medical and auxiliary personnel; public health administration, rabies, rickettsioses, social and occupational health, trachoma, tuberculosis, venereal infections and treponematoses (including serology and laboratory aspects), yellow fever. During 1951, 18 meetings of experts were held including two arranged jointly with other Specialized Agencies.

WHO maintains Advisory Services to individual governments on specific health problems. The sections dealing with these services at Headquarters stimulate and co-ordinate the work carried out in the Regions (summarized in the Regional sections). The Central Technical Services are largely carried out for the benefit of all countries. During 1951, WHO's efforts have been directed principally to public health services, improved standards of teaching and training, communicable diseases, co-ordination of research, epidemiological and statistical services, drugs and other therapeutic substances, arrangements for the provision of essential drugs and equipment, and publications programmes.

In 1951, 665 **Fellowships** were granted to fellows from 73 countries, and important work was carried out in connection with **Exchange of Scientific Information, Assistance to Educational Institutions, the Tuberculosis Research Office—Copenhagen, Health Statistics, Biological Standardization, the International Pharmacopoeia, Drugs Liable to Produce Addiction,** and **Supply Services.**

WORK IN INDIVIDUAL COUNTRIES IN THE REGIONS*

AFRICAN REGION

Angola: During the visit of the acting regional director to Angola, a request was made for the services of a sanitary engineer to advise on the water supply and the installation of different sewage systems.

French Equatorial Africa: A project in the control of malaria under the technical assistance programme was suggested for French Equatorial Africa by the French delegation at the first session of the Regional Committee.

Gold Coast: One fellowship was awarded to the Gold Coast during 1951.

Liberia: After the surveys on public health administration and environmental sanitation made in 1950, a basic agreement for technical assistance to this country was signed. A public health officer was sent to help the Director of Public Health and Sanitation to frame a public health law and by-laws. A sanitary engineer was appointed to train local sanitary workers in Liberia and set up a national programme in environmental sanitation. An expert from Headquarters went to study the malaria situation in Liberia and to help draw up suitable plans. Six fellowships (one under technical assistance) were awarded to undergraduates; two of them were for study within the region. Teaching equipment was also provided.

Mauritius: One fellowship was awarded to Mauritius during 1951.

Nigeria: Nigeria was awarded one fellowship during the year.

Northern Rhodesia: An expert on rabies visited Northern Rhodesia to study the question of vaccine production, and specialists from Southern Rhodesia came to Northern Rhodesia to confer with him.

Seychelles: The Government of the Seychelles sent a request similar to that received from Angola for the services of a sanitary engineer to advise on water supply and sewage schemes.

Southern Rhodesia: Two fellowships were awarded to Southern Rhodesia in 1951. (See also Northern Rhodesia.)

Uganda: WHO has supplied medical literature and teaching equipment to Uganda.

Union of South Africa: Six fellowships were provided by WHO to students from the Union of South Africa.

WHO continued to support the FAO/WHO Brucellosis Centre in the Onderstepoort Veterinary Laboratory.

REGION OF THE AMERICAS

Argentina: A grant was made to the FAO/WHO Brucellosis Centre in Buenos Aires to help it pursue studies of special interest to WHO and FAO.

Bolivia: Bolivia and Peru are conducting nation-wide campaigns in typhus control. For these campaigns WHO is lending expert assistance and UNICEF will provide supplies and equipment. Staff and administrative arrangements were completed early in 1951 when a supervisor was provided, and the first quota of supplies was delivered; the campaign was started in May, when the areas bordering on Lake Titicaca were sprayed.

WHO has continued to give technical advice on constructing, equipping, and organizing a children's hospital at La Paz, which UNICEF is equipping.

(Work which was or is to be carried out with the funds of the Expanded Programme of Technical Assistance is marked with an asterisk.)

WHO was also helping with plans for a project in fundamental and health education in Bolivia, in connexion with UNESCO.* For this purpose an expert from WHO and one from UNESCO visited the country during the year.

Brazil: WHO, together with UNICEF, has helped to operate a maternal and child health programme in Brazil, which provides for supplies and equipment for maternal and child health centres, advice on feeding, the training of midwives and child-care aides, and general health education in the four northeastern States of Paraíba, Piauí, Ceará, and Rio Grande do Norte. This programme began in 1951.* A consultant in maternal and child health, sent by WHO to review the programme, subsequently made recommendations on the future development of the programme and its extension to five other states in northeast Brazil.

With the help of a WHO adviser, technicians are being trained in the serology of syphilis at the Faculty of Hygiene and Public Health of the University of Sao Paulo, and the university has started to appoint necessary professional and auxiliary personnel to continue the project after the adviser completes her work. Equipment was purchased and personnel recruited for this programme, which began in August.

British Honduras: With the assistance of WHO and UNICEF, British Honduras has carried out an insect control programme to fight malaria and to control yellow fever.

Chile: A diphtheria-pertussis vaccination campaign, in which the Chilean Government has been assisted by WHO and UNICEF, began in the Province of Santiago at the end of 1950. Both medical and social welfare institutions in the country are taking part in this campaign, which aims at immunizing 40% of the children between three months and six years of age.

Infant mortality is extremely high in Chile, the principal causes of death being respiratory infections, premature births, enteric infections, and tuberculosis and other communicable diseases. Accordingly, with the assistance of WHO and UNICEF a programme for the development, improvement, and extension of maternal and child health services, particularly in rural areas, was begun. Local personnel were given practical and technical training.

During 1951 a preliminary survey was made in a rural section of the province of Concepción.

The consultant who visited Chile at the end of 1950, to advise on the collection and disposal of garbage in the city of Santiago, submitted a report containing recommendations to the Government of Chile.

Colombia: At the end of the year Colombia was not yet a member of WHO. WHO, however, has helped the Government in a nation-wide campaign of vaccination against diphtheria and pertussis. UNICEF has assisted with equipment, supplies, and preparation of vaccines for the campaign, and WHO has provided a consultant, who has also been available to help with the work in Chile.

WHO, with UNICEF, started a programme for training midwives,* which aims at producing a number of highly trained nurse-midwives who will act as instructors and supervisors of practical midwives.

A malaria and insect control programme, which includes a campaign for the eradication of Aëdes aegypti, is being organized by WHO and UNICEF.*

Costa Rica: In the insect control programme conducted by the Government with the assistance of WHO and UNICEF, DDT spraying was carried out from January to the end of July.

In April a study of the school of nursing attached to the San Juan de Dios Hospital in Costa Rica was made; the plans for WHO's assistance to that school were completed, and in July an international team of three nurses arrived in San José.*

The architect who was appointed as consultant to the Government in 1950, to prepare preliminary drawings for buildings for cancer and maternity services in the San Juan de Dios Hospital, completed his work in 1951.

Experts from WHO and UNESCO have visited Costa Rica to plan assistance to this country in fundamental and health education.* This programme will be implemented in 1952.

During the year WHO provided a consultant who investigated the possibility of organizing a school of medicine in Costa Rica.

Cuba: For an insect control programme, for which assistance from WHO and UNICEF was requested by the Government, a detailed plan of operations was prepared during the year. Consultants will be sent to assist with this project, which is to be part of a regional insect control programme for Central America.*

Dominican Republic: An insect control programme was being planned for the Dominican Republic, to be carried out with the help of WHO and UNICEF.*

Ecuador: The BCG vaccination campaign, begun in July 1950 by the Government and the Joint Enterprise with the help of WHO's regional adviser in tuberculosis, was completed in July 1951.

A tuberculosis control and teaching centre, set up in Ecuador with the help of WHO and UNICEF, began to operate in the latter part of the year.*

The WHO team which has been carrying on an experimental programme for the control of syphilis by mass treatment with penicillin began operations at Portoviejo in January, and completed its work in April. In this programme, in which the Pan American Sanitary Bureau also co-operated, some 6,000 persons were treated with penicillin; a continuous follow-up was maintained to observe relapses and reinfections, and at the same time a mass serological survey was made for the evaluation of this work. The Ecuadorian authorities have asked WHO to extend this project and to enlarge the area to include the Manta district.*

To help the Government strengthen maternal and child health services and to train technical and auxiliary personnel, WHO appointed a medical and a nursing consultant for two months to survey the maternal and child health facilities in the country and to help draw up a programme for improving maternal and child health services within the general public health administration. Further help will be given to the Government by WHO and UNICEF in 1952.

El Salvador: The WHO consultant who went to El Salvador at the end of 1950 to obtain information on the possibility of setting up a health demonstration area completed his survey in 1951.

WHO's work in a tuberculosis project in El Salvador, which began in July 1950, was completed in San Miguel in February 1951, in San Vicente in September, and was about to be started in Sonsonate. In San Miguel, where work was carried on for about seven months, approximately 15,000 persons out of a population of 22,000 were examined.

On September 3, 1951, the mass BCG programme assisted by WHO and UNICEF was begun: during the first week 35,000 persons were treated and 18,000 vaccinated, most of them children of school age. The authorities have requested that this programme be continued through 1952, in order to make it an integral part of the health demonstration area described above.

In response to the offer from the Pan American Sanitary Bureau of emergency assistance when an earthquake occurred in El Salvador in May, the Ministry of Health said that antibiotics and water-purifying agents were urgently needed. The regional office sent by air 4,000 capsules of chloramphenicol and 4,000 capsules of aureomycin to treat victims of the disaster; 225 pounds of chlorinated lime were also sent to purify water and prevent epidemics which might break out as a result of the earthquake. The WHO team of medical and technical personnel for the tuberculosis demonstration area in El Salvador immediately made itself available for

emergency work, and helped treat the injured in the San Miguel hospital.

In the insect control programme being carried out by the Government with WHO and UNICEF assistance, the preliminary inspection covered 110 out of 260 counties in the country, and Aëdes aegypti were found in 70 of them.

In 1951 UNICEF and WHO gave assistance to a programme for improving and increasing maternal and child health facilities, extending the health services to areas where there are none, increasing the number of deliveries in hospitals, and attended by doctors, and giving additional training to midwives.

Guatemala: The insect control programme in Guatemala, which was started in July 1950 with the help of WHO and UNICEF, provided for spraying the whole endemic malaria area in the country with DDT.

Assistance was given to the Institute of Nutrition of Central America and Panama, which is located in Guatemala, to enable it to become a training centre for the entire region.

Haiti: The programme for yaws eradication and the control of syphilis in rural areas, which had been started with the assistance of WHO, the Pan American Sanitary Bureau, and UNICEF in July 1950, was carried out in several large areas. By August 1951, 543,000 persons in over 1200 communities had been treated. To date, no failures or reinfections have been seen. WHO will continue its technical support of the programme throughout 1952 and probably 1953.

A WHO consultant in health education continued to work with the Ministry of Health in Haiti to strengthen its section on health education, to expand the services in the country, and to advise on specific programmes.*

WHO is collaborating with UNESCO in the fundamental education programme in the Marbial Valley and is providing two fellowships, one for a nurse, the other for a sanitarian, as well as medical supplies.

The regional adviser on environmental sanitation made a survey of the sanitary services in Haiti and made suggestions for strengthening the programme in environmental sanitation of the national health administration of Haiti.

WHO was also asked for assistance by the Government in establishing a health demonstration area in the district of Petit-Goave, which has a population of 100,000.* The preliminary survey was completed in 1951, and a health unit will be established early in 1952 in the city of Petit-Goave.

Honduras: WHO and UNICEF have continued to assist the Government with its insect control programme. At the end of the year, plans were being made for a health education programme in Honduras.*

Jamaica: The mass BCG vaccination campaign mentioned in the Annual Report of the Director-General for 1950 was started in September 1951. The Government of Jamaica has asked for a radiographer and a bacteriologist to carry out a survey of this programme.

Mexico: WHO gave help to the Regional Centre of Fundamental Education for Latin America,* set up by the Government of Mexico and UNESCO in Patzcuaro, Mexico, which is also being supported by the Organization of American States. A consultant in health education has worked for this centre since April as a member of the staff.

A grant was made to the FAO/WHO Brucellosis Centre in Mexico City to help it pursue studies of special interest to WHO and FAO. Plans were made to start an insect control project in 1952.

Nicaragua: WHO has planned to give technical advice on health education to Nicaragua, and at the end of the year a consultant was being recruited for this project.* Fellowships in health education were also provided. An insect control programme was carried out by the Government with the assistance of WHO and UNICEF.

Panama: The Government of Panama has requested the co-operation of WHO and UNICEF in an insect control programme. At the request of the Director of Public Health, the regional adviser on tuberculosis visited Panama to study a co-operative programme in tuberculosis control.

Paraguay: In 1951, a programme was started, with assistance from WHO, the Pan American Sanitary Bureau and UNICEF, to combat malaria and complete the eradication of Aëdes aegypti.

WHO has agreed to help organize a maternal and child health programme in the Asunción-Villarrica area, and an adviser and nursing consultant began to work on this project in September.* The ultimate aim of this programme is to integrate the maternal and child health services into the general public health services through a network of health centres. The Organization will also provide fellowships, and UNICEF has furnished supplies.

Further help was given in setting up a demonstration project in the control of venereal diseases in the same area.* WHO also made detailed plans for helping with an improved programme in tuberculosis control and a rural demonstration scheme to combat tuberculosis.* The programme will begin in early 1952 and will last for two years.

Peru: The campaign against typhus, which has been carried on with the help of WHO and UNICEF in the border areas of Bolivia and Peru, began in October in the El Cuzco area. A smallpox vaccination campaign was begun at the same time. This project has the same objectives as the campaign in Bolivia.

WHO and UNICEF plan to help with an integrated programme of general public health services in the Lima-Pativilca-Huáraz area: those in maternal and child health, communicable diseases (including tuberculosis), health education, and nutrition.*

Work on the programme against communicable diseases, which also is part of the integrated programme of general public health, has been going on in the Lima-Pativilca-Huáraz area since September 1950. In this programme DDT was applied and immunization given against smallpox, diphtheria, pertussis, and typhoid fever. Equipment was furnished by UNICEF.

WHO is also helping to organize Peru's medical record libraries which are administered by the Social Security Administration and the Department of Social Welfare.* For a public health demonstration programme in the province of Callao, near Lima, the Government has requested assistance from WHO and UNICEF.* A demonstration programme in tuberculosis control will be started early in 1952 with the help of WHO and UNICEF. The Government has asked WHO for help in establishing a health demonstration area in the province of Chiclayo.* The preliminary survey of this area was completed in 1951 and a public health programme will be begun there in 1952.

Trinidad: At the request of the Government, WHO and the Pan American Sanitary Bureau gave technical advice on a mental health programme and helped to draw up preliminary plans for the proposed additions to the mental hospital in Port of Spain. The programme was prepared and discussed with the authorities concerned.

United States of America: In 1951 the FAO/WHO Brucellosis Centre in Minneapolis, Minnesota, was engaged in research of international importance. The International Treponematoses Laboratory Center, at the Johns Hopkins School of Hygiene and Public Health, continued its work. The United States of America par-

ticipated in the Q-fever survey being carried on by WHO, and continued to provide the Organization with a large number of experts.

Venezuela: A consultant helped the Government of Venezuela carry out a survey to determine the nature and extent of bovine tuberculosis in the country. Another consultant gave technical advice on measures necessary for the control of a rabies epidemic in the city of Caracas.

To prepare them for work in anti-venereal disease projects in their own country, two doctors from Paraguay received training at the Venereal Disease Serology Laboratory and Training Centre in Caracas.

SOUTHEAST ASIA REGION

Afghanistan: The malaria control team, consisting of three WHO experts and appropriate national personnel, which commenced operations in May 1950, continued its work in the Kunduz district.

Five medical officers and one entomologist received training in malariology outside the region, and four senior and eight malaria inspectors as well as 22 insect collectors have been trained locally. A good start has thus been made in laying the foundations for an anti-malaria organization and a malaria institute. During the malaria off-season the team also helped the Government to conduct an anti-typhus campaign in Kabul and Khandahar, where typhus epidemics occurred every year.

The team also started to train sanitary inspectors, insect collectors, and malaria inspectors during the winter months and the Government has asked for the sanitary engineer to be retained till the end of 1952 so that he may continue this work. A course in health education was begun at the teachers' training centre.

WHO provided a public health adviser* to help the Government survey its medical and public health needs and determine how to organize a more adequate public health service. This survey will enable the Government to make the best possible use of any additional funds that may be forthcoming from outside agencies.

In 1950, with help from WHO and UNICEF which provided a team of three experts, the Government inaugurated a pilot project to promote maternal and child health and to control venereal diseases. In 1951, the programme was expanded under technical assistance and two more nurses were recruited.

Two WHO experts made a survey of the medical training facilities in the country and made recommendations for improving them. The Organization also recruited two international male nurse instructors for the male nurses' school and provided a professor of epidemiology and social medicine for the Faculty of Medicine in Kabul. In addition to his academic work, he will take part in the teaching programme and establish a department of hygiene and social medicine and a field training-centre for undergraduates.

Medical literature was sent to Afghanistan and four fellowships were awarded in 1951.

Burma: WHO's work in Burma did not begin until 1951 and, in view of the disturbed conditions prevailing in the country, much of the work has been carried out in urban areas. It has centred round improving maternal and child health work, establishing adequate nursing services, and controlling communicable diseases: malaria, tuberculosis, and venereal diseases.

A project was inaugurated in 1951 when a WHO team of a paediatrician, five nurse-educators and four public health nurses started work in Rangoon and Mandalay. The cost of two members of the team was borne by UNICEF, which also provided equipment and supplies for maternal and child health centres and maternity wards.

Eight fellowships were awarded to nurses from outside Rangoon to enable them to attend a three-months course of nurse-educators which began in September at the Rangoon General Hospital. The course was conducted with the assistance of the WHO nurse-educators mentioned above.

Clinic for mothers and children in Burma. Daw Khin Kyi, widow of Aung San, is the Director of the Mother and Child Welfare Department of Burma.

The maternal and child health programme was linked with work on the control of veneral diseases among women and children and for this part of the project a venereologist, a serologist, and a public health nurse were provided and were working in the field by the end of the year. UNICEF has furnished supplies and equipment and it is expected that the Government will provide additional national staff. Two short-term fellowships in venereal diseases were provided in 1951.

WHO has provided a demonstration team in malaria control, consisting of a malariologist, an entomologist, a sanitarian, a public health nurse, and some auxiliary personnel.* Equipment and supplies were furnished by the Government through bilateral assistance. The preliminary survey, which was delayed owing to disturbed conditions, was started in October in the neighbourhood of Lashio. Three fellowships in malaria were awarded, two for one month's study in Thailand and one, in entomology, for one year's study outside the region.

Various international and other agencies have been asked for help in rebuilding the health services of Burma which were disrupted by the war. WHO has provided an expert in public health administration* who, since August, has been advising the Government on the planning, development and co-ordination of its health services and on ways of improving the training of medical and para-medical personnel.

A tuberculosis demonstration and training centre* was set up in Rangoon. Equipment and supplies were provided by UNICEF. The work has progressed well and towards the end of the year a BCG team, asked for by the Government, also started work.

Surveys of various population groups are being made by means of tuberculin tests and mass radiography. The BCG team was paid for by UNICEF and a mobile apparatus for mass radiography was being sent by WHO under technical assistance. Provision was also made for a lecturer on tuberculosis* who will also act as adviser to the Government.

In the latter part of the year, a consultant provided by WHO made a survey of leprosy in the country. He will make recommendations to the Government. Further assistance from WHO will be based on his findings there.

Medical literature was provided. Five fellowships were awarded under the technical assistance programme, and one fellowship under the regular budget.

Ceylon: In Ceylon the national health service is comparatively well organized and well staffed, but the Government requires help with some special problems. During the year, the aid given to Ceylon by WHO was aimed at improving the training of nurses, hospital and institutional diets, tuberculosis services, and measures for the control of malaria and venereal diseases.

As the country is seriously short of fully trained nurses, one nurse to teach paediatrics and two to teach midwifery were posted to Colombo, where, since May, they have been assisting with various training activities. At the end of the year a second paediatric nurse was also appointed. Though prospects are favourable, progress has been slow, because the Government has found it difficult to obtain adequate matching personnel and basic equipment. As another part of this project, WHO and UNICEF have helped to strengthen Colombo's school of nursing and in November a nurse was sent to this school to draw up a balanced teaching programme and to correlate the teaching in the lecture room with that in the hospital ward. A second nurses' training school* was established at Kandy, with the help of WHO, and was opened in October. Funds for the school were provided under the technical assistance programme, and WHO has recruited a principal and two nurse-educators. The necessary teaching equipment will also be supplied by WHO. In 1951, four UNICEF fellowships administered by WHO were awarded to nurses for study in the United Kingdom.

National teams in tuberculosis, which were trained by the BCG team sent by the Joint Enterprise in 1950, have continued the campaign against tuberculosis. The Government asked WHO and UNICEF to help further by providing additional personnel to strengthen this programme and to expand it to a full demonstration and training project. Accordingly, WHO appointed a radiographer at the end of June, and sent a mobile mass-radiography unit and laboratory equipment.

Ceylon has dealt with malaria by means of a country-wide DDT spraying programme, which it has carried on successfully for several years without international assistance. Malaria is no longer a serious problem but is still a potential danger for the country. The Government, therefore, has asked for assistance in improving facilities at a training centre for the control of insect-borne diseases at Kuranegala, and WHO has provided* the necessary equipment and supplies, and an entomologist, who will work there for two years.

A venereologist, a serologist, and a nurse, as well as equipment and supplies, were provided for a demonstration project in venereal disease control in Colombo. This team arrived in July and started work at the General Hospital.

At the request of the Government, it was decided to establish a health demonstration area* in Ceylon. The Government also requested two experts to study and make recommendations for improving the financial and administrative procedures of its department of medical and sanitary services. A WHO consultant on leprosy was sent to Ceylon for two months and made a detailed survey, as a result of which the Government has asked WHO for a team in 1952.

A three months' course in vital and health statistics was started in Nuwara Eliya in September. It was sponsored by the Government of Ceylon, WHO, and the United Nations Statistical Office. Ceylon acted as host country. Twenty-eight fellowships were awarded to students from Ceylon and other parts of the region to attend this course;* five Fellows were accepted from countries outside the region. Medical literature was sent to Ceylon. Two fellowships were awarded under WHO's regular programme, and ten under technical assistance; four were administered on behalf of UNICEF.

India: The major part of WHO's work in India during the period covered by this report has been devoted to the control of malaria, tuberculosis, and venereal diseases, the improvement of maternal and child health services, and the strengthening of medical education. WHO has been operating demonstration projects in these fields for about two and a half years, and sufficient experience has been gained to allow of some assessment of their value. This experience indicates that India will not need any more demonstrations in malaria: the experienced staff is there, and the problem is only to ensure that the Government uses it. WHO has therefore concentrated on helping the Government to produce badly needed supplies of insecticides which will enable it to extend malaria control throughout the country with its own resources. In maternal and child health there is a great lack of higher grade supervisory staff, and WHO has therefore concentrated recently on helping to establish training programmes. In 1951, teaching staff was provided for medical institutions, courses were given, and personnel trained.

Malaria Team No. 1—Terai (Uttar Pradesh): The demonstration team in malaria control, which began operations in Terai in May 1949 with a WHO malariologist and public health nurse, had, after two years' operations, covered an area of 1,500 square miles with a population of 110,000.

Malaria Team No. 2—Jeypore Hills (Orissa): During its first year, the WHO team in Orissa—a malariologist and public health nurse—which started work in May 1949 covered an area of 340 square miles with a population of 61,000; in the second year the area was extended to 664 square miles with a population of 120,000. The spleen rate in this area was originally 90% to 95%, but at the end of the second year there had been a reduction of 15% to 20%; the average enlarged spleen rate had been reduced by about 30%, and a 50% reduction in parasite rates among children aged two to nine was also noted. The morbidity rate, which had varied between 18 and 20 per 1,000 people in 1950, fell to 1.5 to 3.75 per 1,000—at the close of the operations. The international staff was withdrawn in May 1951, and it is hoped that the Government of Orissa will not only carry on the programme, but expand it.

Malaria Team No. 3—Malnad (Mysore): The Malnad team, which was in the field in June 1949, with a malaria engineer and public health nurse, covered in its first year an area of 488 square miles with a population of about 49,000. Before the spraying, the spleen index in this area was about 38%, and in the check area (unsprayed), 36%. After the first year there was a decrease to 19% in the demonstration area and in the check area, to 24%. The parasite rate among infants, which before the spraying was 4.6%, dropped to zero after the first spraying; in the control area it remained at 3.4%. In the second year the area covered was 1,600 square miles with a population of 120,000. At the close of this year the spleen rate in the demonstration area varied from 11% to 13%; in the untreated areas it increased slightly. Of 1,067 blood smears from infants born after the spraying, not one was found to be positive. A programme of school health education was also built up, and roadside clinics, particularly popular with the villagers, were established. The team also carried out an intensive teaching and training programme, in which the people and the national Government co-operated. The international staff was withdrawn in May, and the Government made satisfactory arrangements for continuing the work. The team received active local co-operation.

Malaria Team No. 4—Ernad (Madras): In Ernad, Madras State, a WHO team of a malariologist and

public health nurse began work in December 1949. During 1950 the team covered 93 square miles with a population of 52,502. Among the population the spleen rate had been above 43%; at the end of 1950 it had been reduced to 18%, while in the control area it ranged between 45% and 53%. In 1951 the area was increased to 803 square miles, and about 115,000 people were protected. The State government which used the facilities available for training local staff and co-operated fully with the team, took over the work at the end of the year at the time the international staff was withdrawn.

In maternal and child health WHO has assisted the Government in two areas, one urban, the other rural, which have served for demonstrating modern techniques and also as training areas, with supplies and equipment provided by UNICEF.

With the help of UNICEF an up-to-date department of maternal and child health was developed at the All-India Institute of Hygiene and Public Health in Calcutta. Students from India and the neighbouring countries in the region will be trained there. UNICEF is also supplying equipment for 100 maternal and child health centres in India and for paediatric teaching centres in Bombay, Delhi, Madras, Patna, and Vellore.

To deal with the shortage of nurses, a nursing project was established at the Medical College Hospital in Calcutta with an international staff of four.

With the help of WHO and UNICEF, the Government is establishing three large demonstration areas for tuberculosis control and training, in Delhi, Trivandrum, and Patna. Those in Delhi and Trivandrum commenced operations and training programmes were started during the year. In 1951 WHO and UNICEF took over the responsibility for assisting the BCG vaccination campaign in India, which was formerly directed by the Joint Enterprise. They helped the Government to continue and extend the mass campaigns already started in Uttar Pradesh, Punjab, and Madhya Bharat.

The demonstration project in the control of venereal diseases which was begun in Simla (Himachal Pradesh) in 1949 continued its activities, with one venereologist, one serologist, a nurse, and a health educator. In addition to making surveys and giving treatment, the team organized courses for training venereologists, serologists, and auxiliary personnel. At the end of the year the international staff was withdrawn, and the work was transferred to the national health administration. The experience gained at this centre has shown the need for establishing a network of venereal disease training centres, and as a first step the training activities which had been carried out at Simla were transferred to the Government General Hospital in Madras. WHO recruited staff in October to help strengthen the venereal disease department of that hospital.

In co-operation with the Government of India WHO and FAO conducted a regional course in nutrition* at Calcutta.

The Government availed itself of the services of a WHO consultant in mental health during the last three months of the year to help it draw up a plan for developing the mental hospital at Bangalore into an All-India Research and Teaching Institute in Psychiatry.

The Government of India has requested WHO's services in establishing a DDT factory and a penicillin plant.* WHO will provide technical staff to design these units and bring them into operation, and to help train national personnel. For both of these projects UNICEF will provide imported equipment.

In order to assist the Government of India with medical education,* WHO is recruiting a principal for the Medical College in Trivandrum and a professor of pharmacology for the School of Tropical Medicine in Calcutta.

A consultant was recruited, at the request of the Government, to advise on the setting up of a pilot experiment in the use of the "rhythm" method of population control. After completing his work in the middle of December, he went to Ceylon to conduct similar studies there.

Sixteen fellowships were awarded to India under the regular programme, and 25 under technical assistance. Ten were administered on behalf of UNICEF. Medical literature was provided.

India, French Settlements in: At the request of the French Government, WHO sent equipment and supplies to the value of US $1,500 to the leprosy laboratory at Pondicherry. This laboratory is being used to train leprosy workers. One fellowship was awarded to the French Settlements in India under the regular WHO programme.

India, Portuguese: To assist and strengthen the public health services in Portuguese India, four fellowships were awarded during the year, in malaria, tuberculosis, maternal and child health, and public health, and one other was awarded under technical assistance.

Indonesia: To control malaria, which is a serious problem in Indonesia, a plan of operations was developed by WHO and the Government to set up a demonstration team in the Tjilatjap area in mid-Java with a training centre for local personnel.* WHO will provide four international experts for two years and the Government will contribute supplies, equipment, and local staff. The team will help develop a national malaria control service. The malariologist and entomologist were in the field at the end of the year.

A large treponematoses control programme which was started in Indonesia in 1950, with the help of UNICEF—which provided almost one million dollars' worth of supplies—was continued throughout 1951.* Medical literature was sent and 18 fellowships awarded to Indonesia, including four under technical assistance and eleven given by UNICEF.

Thailand: From various international organizations and bilateral agencies Thailand has obtained a large amount of assistance in developing its health and other services. WHO has helped mainly with the control of malaria, yaws, and venereal diseases, and with the reorganization of nursing and maternal and child health services.

In August 1949, WHO initiated a malaria control demonstration project at Chiengmai. UNICEF furnished equipment and supplies. During the first year, a population of about 40,000 was protected by DDT indoor residual spraying. The team, which at first consisted of a malariologist, an entomologist, and auxiliary personnel, was later joined by a public health nurse and a sanitarian. It made epidemiologic and entomologic surveys of the Serapee district before starting control measures. In 1951 these operations* were successfully extended to the surroundings of Chiengmai, and covered an area of 1,270 square miles with a population of 188,000. The control operations have been reported as being very effective. In many villages the spraying squads, who were much appreciated, not only received the voluntary help of the local people but were provided with midday meals. From people in adjacent areas which had not been sprayed, petitions were received asking for the work to be extended to these districts. This will be done by a team of national workers who have been given intensive training in control work.

During 1951 provision was made for WHO to help with a maternal and child health and nursing programme* in Bangkok. For this project WHO agreed to provide a paediatrician, a nurse consultant, a midwifery adviser, a public health nurse, and a sanitarian: UNICEF will send supplies and equipment. By the end of the year the paediatrician had started work, and the rest of the staff was being recruited. The nurse consult-

ant will be attached to the Ministry of Health and will work with the national nursing adviser who will eventually take over this work. At present, the national nursing adviser is on a WHO fellowship. Five other fellowships were also provided in connexion with this project. Provision was also made for a nurse* to advise on the school health aspects of the teachers' training programme being conducted by UNESCO. UNICEF supplied laboratory and clinical equipment for work in venereal disease control at the Bangkok Hospital, part of the maternal and child health programme.

A further training and demonstration programme in maternal and child health and nursing* was set up in the Chiengmai area, with equipment and supplies from UNICEF. The public health nurse with the WHO malaria team already in the country and a public health adviser started on this project in the autumn.

Early in October, work was started on establishing a demonstration and training centre in tuberculosis* in Bangkok.

The treponematoses control project* which was established in 1950 at Rajburi was continued in 1951, and the work was extended to other parts of the country. One fellowship in serology was awarded for this project, for which UNICEF provided the supplies.

A survey in mental health was conducted in Thailand during the year by a consultant from Headquarters. With the help of FAO and WHO, nutrition surveys were started as a guide for plans to develop a nutrition programme for the country. Thailand sent five Fellows to the regional training course in nutrition* in Calcutta.

A consultant in filariasis with two assistants made a three months' survey during the year. Further WHO assistance in combating this disease will be based on their findings and recommendations.

Four fellowships were awarded to send students to the regional course in vital and health statistics held in Ceylon.* Altogether, Thailand was awarded 21 fellowships in 1951, of which 10 were financed under technical assistance and two were administered on behalf of UNICEF.

EUROPEAN REGION

Austria: At the request of the Government, staff members of WHO and FAO, together with a nutrition expert provided by WHO, visited Austria during the year. This group gave lectures in several parts of the country and held a series of conferences with Austrian experts on nutritional problems of immediate importance. A WHO consultant visited the country to help plan for work in environmental sanitation.

A visiting team sent by WHO in 1950 had advised on the establishment of a heart clinic in the University of Vienna, and UNICEF had provided initial supplies. During 1951, WHO assisted this clinic further by supplementing the supply programme with some important items of equipment. The Government has continued the project, and the centre is now teaching and training specialists in the treatment of congenital heart disease.

During 1950, a member of WHO's staff went to Austria to help develop a programme for the prevention of juvenile epilepsy in Vienna. UNICEF has helped with this programme by sending supplies, and WHO by providing a consultant and awarding fellowships. The centre has been established; most of the supplies are already in the country, and a student took advantage of a fellowship in special diagnostic work. At the end of the year a programme for helping with the development of child guidance work was also being planned.

After the visit of a WHO consultant, the Austrian Government prepared a programme for work with handicapped children, in which UNICEF is assisting with supplies.

A WHO consultant visited Austria in 1950 to help in framing a comprehensive scheme for improving diagnostic and treatment facilities in tuberculosis control. During 1951 the supplies and equipment arrived in the country, and the central laboratories were being established. In Vienna, the central dispensary was reorganized, with the help of UNICEF supplies, and the mass case-finding programme was begun at the end of the year. UNICEF has also assisted with supplies for the establishment of a BCG laboratory which is to provide the vaccine for a BCG vaccination programme being carried on throughout the country. A WHO consultant visited Austria during 1951 to discuss the expansion of the work in tuberculosis control and the organization of special case-finding procedures in areas of high incidence. The Government is also carrying out a programme for the treatment and control of tuberculous meningitis, with supplies contributed by UNICEF and WHO.

Medical literature, medical periodicals, and some teaching films on the subject of mental hygiene, were supplied by WHO. Twenty-three fellowships were awarded, including three from UNICEF.

Belgium: During 1951 a WHO study group on public health administration visited Belgium, where it gave particular attention to problems of industrial health. Fifteen fellowships were awarded to Belgium during the year.

During December, the Government, jointly with the United Nations and with the collaboration of WHO, sponsored a two weeks' seminar on the medico-socio-psychologic examination of offenders, to which participating teams of psychiatrists, jurists, and social workers came from other European countries. In this seminar the general problem of the examination of offenders was studied, particularly from scientific, legal, and administrative points of view. As well as awarding fellowships to psychiatrists, WHO appointed a number of experts who presented short papers on particular aspects of this problem.

Bulgaria: Although the Bulgarian Government did not request direct services from the Organization in 1951, WHO continued to advise on UNICEF supply programmes, which were developed with the assistance of the WHO liaison officer attached to the European headquarters of UNICEF.

Czechoslovakia: The Czechoslovak Government did not request direct services from the Organization in 1951, but, as in Bulgaria, WHO continued to advise on UNICEF supply programmes with the assistance of the liaison officer attached to the European headquarters of UNICEF who visited the country at the end of 1950. A further visit was planned for 1952.

Denmark: The Anaesthesiology Centre in Copenhagen completed its second year of work, under the joint sponsorship of the Danish Government, the University of Copenhagen, and WHO. Trainees from eight European countries, in addition to Danish trainees, attended. WHO provided an instructor for the entire course, a second instructor for shorter periods, and a series of visiting lecturers on specialized topics, together with some supplies of books and teaching equipment.

During the year WHO helped the Government and the University of Copenhagen to organize a seminar on alcohol studies, which was attended by joint health and social welfare teams from 10 other European countries.

A WHO consultant visited Denmark to follow up the team of public health nurses who had participated in the nursing conference in the Netherlands in 1950. An expert on the staff of WHO visited Denmark to study problems relating to the health of seafarers and the development of programmes for seafarers in other regions. Various current problems were discussed with the authorities in Copenhagen including the possibility of WHO participation in an organized statistical survey of morbidity which is being carried out in the coun-

try. Denmark continued to provide experts for the work of WHO and the inter-country programmes. Including fellowships for these programmes, 20 were awarded during the year.

Finland: At the request of the Government, a WHO consultant paid a short visit to Finland to help plan a national study on nursing. The Organization was represented at the opening of the Institute of Industrial Hygiene in Helsinki, which, it is hoped, will later offer group training facilities for the region.

Two members of the WHO staff visited the country for discussions on a general health programme to be carried out under technical assistance. Subseqeuently, WHO provided, under the regular programme, experts in environmental sanitation, health education, and venereal disease control to advise on these particular aspects of the programme requested.

WHO awarded a fellowship to a Finnish bacteriologist to study the problems of infant diarrhoea with a view to making a special laboratory investigation of this problem on his return to Finland.

After a WHO adviser had visited Finland in 1950, WHO, with the Government, planned a programme to help the maternal and child health services develop additional teaching and training facilities for public health nurses, medical students, physicians, and midwives. WHO also gave assistance for a project for the care of premature infants, which made possible the expansion of the services in eight key hospitals throughout the country and enabled the Government to extend its plans for a national programme.

Assistance in establishing a congenital heart disease centre was also approved by WHO and UNICEF during 1951. Although the heart clinic has begun operations, the project will not be in full operation until early 1952.

The Government began a demonstration project for the control of congenital syphilis in 1950 and continued it throughout 1951, UNICEF providing penicillin, laboratory equipment, x-ray, films, and vehicles.

After a visit of a WHO consultant on handicapped children, the Government submitted a request to UNICEF for assistance with this problem.

A joint WHO/UNICEF project in tuberculosis control was requested during 1950. It is estimated that during 1951 over a million chest radiographic examinations were made. The dispensary system was improved and over half a million children were tested and vaccinated. The central diagnostic laboratory in Helsinki was organized early in 1951.

At the request of the Government a WHO expert on mental health lectured in Finland on behaviour patterns and neurosis.

Including individual fellowships, 26 awards were made during the year, and medical books, periodicals, and an electrical auscultation apparatus for teaching were supplied.

France: In France excellent progress was made in 1951 with a study, sponsored by WHO and the Rockefeller Foundation, which is designed to determine the type of health visitor best suited to meet the health and welfare needs of the family. A WHO expert gave a lecture at the Sorbonne on special aspects of behaviour in relation to mental health. During the Congress of Hygiene in Paris, a short discussion was organized on the training of public health officers, health visitors, and sanitarians. WHO provided some of the discussion leaders for this conference and helped financially with the publication of a report.

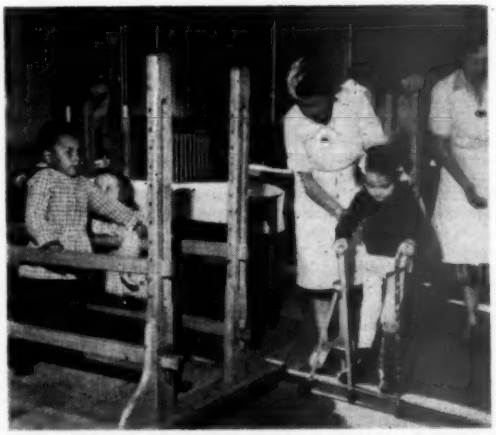
A WHO staff member, accompanied by a consultant, discussed with the Government the next stage in developing a programme for premature infants. This national programme which envisages the expansion of facilities for the care of premature infants had been planned by the French Government for 1949 with the help of WHO and supplies from UNICEF. UNICEF decided to contribute, during 1951, a further sum of money for supplies, and the Government's plans, approved by WHO, are now to establish 41 centres in all and to strengthen teaching, training, and research facilities. UNICEF has also provided fellowships for specialists and nursing personnel, to be administered by WHO.

UNICEF, with the approval of WHO, has provided equipment and supplies to three centres for the re-education and rehabilitation of children who have had acute poliomyelitis. WHO has also given technical approval of supplies and equipment to be provided for expanding facilities for dealing with children suffering from congenital heart disease and for screening school children for auditory difficulties. With the co-operation of WHO and supplies from UNICEF, the French Government has also strengthened two child-guidance centres, which were developed in 1951. Six fellowships for this work were provided by UNICEF and administered by WHO. WHO has agreed to help with a plan to strengthen 50 rural maternal and child health centres, for which radiographic equipment for screening mothers and children suspected of having tuberculosis will be provided by UNICEF.

Also, with WHO approval, UNICEF has provided supplies and equipment for producing gamma globulin and pertussis vaccine. Co-operation with the International Children's Centre in Paris continued during the year.

WHO provided 19 fellowships to symposia and training courses organized by the centre. Including fellowships for individual studies, 40 were awarded, of which 9 were UNICEF fellowships. Medical books, periodicals, and some teaching equipment were also provided.

Germany, Federal Republic of: In 1950, the Government had requested assistance in the establishment of centres for the treatment of miliary tuberculosis and tuberculous meningitis. By 1951, three main centres and 24 sub-centres had been established, and over 5,000 children had been treated. Supplies were provided by UNICEF until the end of August; since then the Government has continued the project with its own resources. An adviser was sent by WHO and the United Nations to Germany in connexion with the



At the International Children's Center in Paris, young patients receive rehabilitation training. This center is being developed by the French Government in co-operation with UNICEF and WHO.

national programme for handicapped children, for which supplies are being provided by UNICEF.

Greece: A WHO consultant visited Greece to discuss problems in environmental sanitation, in particular advanced training for sanitary engineers. After WHO staff members had visited the country to make preliminary plans, the Government requested help from WHO with a health programme.* This project is mainly concerned with tuberculosis control, but also includes the control of venereal diseases, leprosy, and trachoma. Assistance for medical training institutions, including library organization, has also been requested. WHO has provided an expert to help develop some aspects of the control programme for communicable diseases.

Following the visit of a WHO consultant on tuberculosis control in 1949, the Government requested laboratory supplies and equipment to help it improve its diagnostic facilities. Laboratories, equipped by UNICEF, have now been installed and are operating.

As a result of a visit of a WHO adviser, the Government has made plans for expanding its facilities for handicapped children. UNICEF has provided equipment, for which WHO has given technical approval.

WHO has also advised on the provision of mobile clinics for rural areas and on the continuation of the project for venereal disease control. Both of these projects have been under way during 1951. Plans were made with UNICEF to help the Government improve the maternal and child health services, the control of communicable diseases, and the teaching and training of maternal and child health workers. Medical books and periodicals were provided to various training institutions in Greece. Twelve fellowships were awarded.

Iceland: Three fellowships were awarded, including two for study at the Tuberculosis Research Office in Copenhagen.

Ireland: WHO provided a lecturer, who visited Ireland at the request of the Government to lecture on the history and present development of health services in Denmark. Four fellowships were granted to Ireland in 1951.

Italy: After visits had been made by WHO advisers, the Government developed a national plan for the care of premature infants. This plan had been put into effect with supplies from UNICEF. From funds provided by UNICEF, WHO will administer the fellowships for training six teams (each consisting of a doctor and two nurses) in the special problems of the newborn.

The joint UNICEF/WHO programme for the control of syphilis continued during 1951.

The programme being carried out by the Ministry of Health for the special treatment of children with tuberculous meningitis and miliary tuberculosis has continued during 1951 with the assistance of WHO and UNICEF.

After an expert, sent jointly by WHO and the United Nations, had visited Italy, a programme for handicapped children was developed with the Government during 1950. WHO is administering a fellowship for the study of modern methods of occupational rehabilitation, and negotiations are now under way for an expert in the organization of physiotherapy and occupational rehabilitation to visit the three centres that are receiving equipment.

Medical periodicals were sent to Italy and 17 fellowships were awarded, including several for participation in the group training programmes in Europe.

Luxembourg: One fellowship was awarded for the study of juvenile delinquency.

Monaco: WHO provided Monaco with films for training nurses.

Netherlands: During the year further discussions took place with the Government on the establishment of a port demonstration and training centre in Rotterdam.

Sixteen fellowships were awarded.

Norway: A WHO expert lectured in Norway and held discussions with the national groups interested in certain aspects of mental health, particularly in research on behaviour patterns.

At the instigation of Norway and Sweden, WHO began a study of problems connected with the health and welfare of seafarers. A preliminary investigation of related questions was also begun by ILO and other agencies, with the objective of developing internationally sponsored port demonstration and training centres* in other regions of the world.

A nucleus of a medical library was supplied to the new university medical school in Bergen. Twenty-three fellowships were awarded.

Poland: WHO has continued to advise on UNICEF supply programmes in Poland, most of which were completed in the early part of 1951.

Portugal: During the year, the Government offered the facilities of its well-developed malaria institutions and field control centres for an organized training course in malaria, designed principally for candidates from outside Europe. A member of the WHO staff participated in the course as an instructor, and WHO also provided one lecturer. WHO Fellows from the Eastern Mediterranean Region, as well as from Europe, attended.

Eleven fellowships were awarded. A collection of medical books was supplied to the Instituto Superior de Higiene in Lisbon.

Spain: The acting regional director visited Madrid to discuss possible programmes. He was accompanied by a malaria expert from Headquarters and had an opportunity to see some field work in the successful campaign of malaria control which the Government had been conducting with modern insecticides. Arrangements were made for WHO to provide an important item of control equipment for the use of the insecticide, BHC (benzinehexachloride), for use in the government's anti-malaria campaign.

A member of the WHO staff later visited Spain for discussions on animal diseases transmissible to man.

Another member of the Headquarters staff conducted a short survey of the venereal disease situation in Madrid and Barcelona and held preliminary discussion with the Government on the methods for dealing with these diseases.

Medical literature was sent to the school of public health in Madrid and four fellowships were awarded.

Sweden: Appreciable advance was made during the year in the planning of a Scandinavian school of public health in Göteborg. Members of the WHO staff and the Rockefeller Foundation met at Göteborg with representatives of the Scandinavian countries to determine the needs of the centre more closely and to work out methods of meeting them in the plans for the structure and staffing of the proposed school. WHO's European programme for 1952 provides for material assistance to this school in the next stage of its development.

A WHO lecturer on mental health visited Sweden to discuss behaviour patterns and neurosis. Including individual fellowships, 25 were awarded in all.

Switzerland: Switzerland was represented at the first meeting of the International Anti-Venereal-Disease Commission of the Rhine, held in Geneva in December. Sixteen fellowships were awarded, including some for individual study.

United Kingdom: With the assistance of the British Council, England's rehabilitation services were used during the year to organize a two months' training course in the management of physically handicapped children. This course, which was sponsored jointly by WHO, UNICEF, the United Nations, and some of its other specialized agencies, was designed for composite teams interested in the various aspects of work with handicapped children. WHO awarded 15 fellowships to these teams, on which six European countries were represented. The technical organizer of this training course, who previously visited the countries concerned,

is now joint adviser to the participating agencies for a follow-up in those European countries which wish to expand their services for the handicapped child.

A WHO expert visited England to lecture on behaviour patterns in relation to mental health and also addressed the Royal Society of Medicine in London. An opportunity to study medical services in rural areas was afforded to a WHO study group on public health administration which visited Scotland in the autumn. WHO awarded five fellowships for individual studies; in all 13 fellowships were awarded.

Yugoslavia: In 1951 WHO provided supplies, approved by the Executive Board in 1950, for the newly established heart clinic in Zagreb.

Similarly, the Nutrition Institute in Zagreb continued to develop. As part of a national training course at this institute, a WHO consultant who had visited Yugoslavia during the previous year lectured on some of the biochemical aspects of nutrition. To the teaching equipment provided in 1950, WHO has added a supply of some of the important chemicals required to enable the institute to conduct further training and research in the nutrition problems of Yugoslavia.

The first expert to be requested under the technical assistance programme visited Yugoslavia to help with the expansion of services in communicable diseases. In 1951 the need for other technical experts was studied, and Yugoslav Fellows were selected for training abroad, so that the programme may be expected to be in full operation in 1952.

A WHO consultant visited Yugoslavia in connexion with its brucellosis centre, for which UNICEF has given laboratory supplies, equipment, and drugs. It has been reported that in a selected area this disease has been brought under control.

The Government's plans for a national programme to strengthen maternal and child health activities, assisted by supplies from UNICEF and advice from WHO consultants, have proceeded during 1951.

A project for controlling mycotic diseases of the scalp has also been undertaken by the Government with UNICEF supplies and WHO's technical approval. For this project, which began during 1951, four mobile clinics were attached to 24 central section dispensaries.

After a WHO consultant had visited the country, a plan was developed to introduce modern techniques in preparing vaccines and sera in the National Institute of Hygiene in Zagreb. Supplies from UNICEF were delivered during the year. A special consultant in the control of communicable diseases visited the laboratory and made several recommendations on this project. Two fellowships for the study of vaccine production will also be administered by WHO.

A WHO adviser on maternal and child health visited Yugoslavia, and subsequently the Government planned a programme to expand its work in the after-care and rehabilitation of orthopaedically handicapped children.

During the year, a WHO consultant visited Yugoslavia to advise on the expansion of a national health programme in mental hygiene.

In all, 33 fellowships were awarded (one from UNICEF and 4 under technical assistance), including those for individual studies.

As well as sending teaching equipment to particular institutions, WHO provided supplies of 560 medical periodicals to 45 medical libraries and training institutions throughout Yugoslavia.

EASTERN MEDITERRANEAN REGION

Aden: In 1945, a survey of the school children in the Colony, which has a rapidly increasing population (now about 120,000) showed that 56% were positive to tuberculin testing. The health authorities have asked WHO and UNICEF for assistance in carrying out a BCG campaign, which will begin in January 1952. Plans have been made for the vaccination of the entire population under the age of 18 and for the establishment of a permanent BCG service. Medical journals were ordered for Aden during the year.

Cyprus: A small amount of medical literature was ordered for Cyprus in 1951.

Egypt: At the request of the Government, a demonstration centre for the control of venereal diseases was established at Tanta and began work in May 1951. After the withdrawal of the team provided by the Joint Enterprise, which, by the end of June, had tested two million people, the BCG vaccination campaign in Egypt was continued and expanded by the Government, with the assistance of WHO and UNICEF. Plans were also made for a tuberculosis demonstration and training centre, to be started in Cairo early in 1952.*

Preparations for the proposed health demonstration area in the Qalyub district were continued during the year.* A WHO consultant in public health administration made a detailed study of the project, which envisages an expansion of the pilot project in Sindibis. The United Nations, in response to a request of the Government is examining jointly with WHO a project for a rehabilitation institute for the blind, to serve the whole region.* The importance of including the training of public health nurses and midwives in courses for nurses being given in Egypt was discussed with the Government by WHO advisers. Advice was given toward the end of the year by a consultant in mental health. A programme of trachoma research was also initiated. Toward the end of the year a WHO consultant began an investigation of the value of new molluscicides in the control of bilharziasis. WHO will also provide a public health teaching mission, and will make a survey of industrial health and occupational diseases.*

WHO provided two experts for the regional training courses in vital and public health statistics held at the training centre established in Cairo. During the year 10 fellowships were awarded, all for study outside the region. They covered a wide range of subjects, including industrial hygiene, dentistry, tuberculosis, maternal and child health, and health education. A number of medical books were ordered for Egypt and some pamphlets were supplied.

Ethiopia: The regional adviser visited the country to discuss plans for a project in venereal disease control.* At the end of the year, a public health administrator to help the Government strengthen its health services was being recruited.* As a result of a visit of a consultant in 1950, the treatment of 700 leprosy patients was begun in 1951.* These patients will be treated with sulfetron for a year. A further specialist in leprosy will be sent, early in 1952, to carry out a survey, to make clinical studies, and to advise on the leprosaria at Addis Ababa and Harar. Supplies were also provided. The survey on the incidence of bilharziasis being made by a WHO consultant was extended to Ethiopia late in the year.

Sixteen fellowships, of which one was financed under technical assistance, were awarded during the year; 10 were for medical undergraduates, and five for student nurses. Medical books and journals were ordered and supplied.

Iran: An adviser to the Government on public health administration took up his duties late in the year.* The Government's nation-wide campaign for malaria control which WHO has assisted made excellent progress. The latest reports record a growing appreciation of the work, and the Government has made a substantial allocation of funds to continue it. By the end

of the year about a third of the population which is exposed to infection had been protected.

A medical teaching mission, under the auspices of WHO and the Unitarian Service Committee, visited Iran in October at the request of the Government.* The regional adviser on venereal diseases visited Iran late in the year to discuss a demonstration centre in venereal disease control and training. The Government signed an agreement for a project to be established in 1952.* WHO also made plans to help the Government with the following projects under technical assistance: the control of trachoma, a survey of industrial health conditions, the training of nurses, and the strengthening of demonstration and training centres in tuberculosis and maternal and child health. At the end of the year, personnel was being recruited for these projects.*

Medical journals and microfilms were supplied. Seven fellowships were awarded, one of which was for attendance at the course on vital statistics given in Cairo. Two were financed under technical assistance.

Iraq: A project in the control of bejel and syphilis* was started with the help of WHO and UNICEF at the beginning of the year. The main centre for this project was established at Baghdad, where a laboratory was completed in March. Mobile teams have given treatment to the Bedouin tribes in the Ramadi (Hit), Amara, Basra, and Mosul Liwas.

In the latter part of the year a WHO consultant started work on a rural health survey, which the Government had requested,* and during the year another consultant in public health administration, who was a member of a mission to the country sponsored by the International Bank, completed his work. A WHO consultant in mental health also made a survey toward the end of the year. The preliminary survey for a programme in the control of malaria was completed in July, and a plan of operations prepared for a project in malaria control and training in the Tanjero valley, Sulaimani Liwa, an area with a population of about 40,000.* In February, a WHO consultant made a general survey of nutrition in Iraq.

A WHO expert gave advice on the control of rabies and, late in the year, a survey was made of the incidence of bilharziasis in the northern part of the country. Staff was recruited for a WHO/UNICEF maternal and child health demonstration team, which will start work in 1952. Supplies and equipment will also be provided.* Three fellowships were awarded in 1951, of which two were in public health administration.

Israel: The programme in rabies control which was started in October 1950 was continued, and immunization was carried out in the area between Haifa, Tel-Aviv, and the frontier of Jordan, where rabies is most prevalent.

A medical teaching mission sponsored by WHO and the Unitarian Service Committee visited the country in September.* The regional adviser in tuberculosis visited Israel in connexion with the Government's proposal to establish a tuberculosis control centre at Tel-Aviv. A WHO consultant was assigned to the Government to advise on venereal disease control. Nine fellowships (one under technical assistance), covering a wide range of public health and general medical subjects, were awarded during the year. One was in public health administration and two in hospital administration. Medical books and pamphlets were also supplied.

Jordan, Hashemite Kingdom of the: A detailed plan of operations for a project in malaria control and training, to be carried out in the Ghor (Jordan) valley, was drawn up. Four fellowships were awarded under the regular programme; one was in public health administration, two in communicable diseases, and the fourth was an intra-regional fellowship in malaria. Two further fellowships were awarded under technical assistance. Medical books and journals were supplied.

Lebanon: In September a WHO team started a demonstration of the control of malaria by surveying the Akkar plain, several parts of the Bekaa, the littoral, and the area around Tyre.* Work on this project will be continued in 1952 and, with the help of WHO and FAO, it is planned to enlarge its scope to include the improvement of rural health and agriculture.* The consultant who made the survey of nutrition in Iraq made a similar survey in Lebanon.

The expert in public health appointed by WHO as adviser to the Lebanese Government has also acted as professor of public health and preventive medicine at the American University in Beirut.* At the end of the year two WHO public health nurses had been appointed advisers to the Ministry of Health, to help organize courses in public health.* In 1951, recruitment was started for a maternal and child health demonstration centre.* This project will be continued by WHO and UNICEF in 1953.

Eight fellowships, of which two were for intra-regional courses in health education and statistics, were awarded. Five were financed under technical assistance. Medical journals were also ordered for Lebanon and pamphlets supplied.

Pakistan: The demonstration project for the control of malaria which was started in 1949 in East Pakistan was completed on January 31, 1951. Spraying operations were carried out over 193 square miles of notoriously difficult country; about 182,000 buildings were sprayed and 260,000 people were protected at a cost of $0.16 per head. The Government has continued and expanded the work in West, as well as in East, Pakistan, with the help of UNICEF which provided one ton of DDT for each ton provided by the Government.

The results of the kala-azar survey, carried out by the WHO malaria advisory team in 1950, showed, at the first examination, 8.35% positives. An incidence of 1.85% only was found, however, when 2,153 previously negative children were re-examined in an area which had been sprayed with DDT. The implications are that the transmission of kala-azar is markedly checked by DDT spraying. Arrangements were made for joint WHO/UNICEF assistance to the Government in setting up a DDT production plant, and a WHO expert from headquarters made a preliminary survey to see whether the basic requirements for such a plant could be met.*

The feasibility of developing the production of antibiotics (particularly of penicillin) was also explored.

In August a tuberculosis control and training centre started work in Karachi, with the assistance of WHO and UNICEF.* The Government, with the assistance of WHO and UNICEF, is continuing the BCG vaccination campaign from which the Joint Enterprise team withdrew in July.

The OIHP/WHO Study-Group on Cholera recommended at its third session that a field team should investigate cholera in East Pakistan, and the Government requested WHO to help with this project.* In 1951 a WHO sanitary engineer attached to the team made a survey of cholera in this part of the country and helped the Government draw up a plan of operations for the project. The team will be sent to an area in the East Bengal province of Pakistan.

A training and demonstration centre in maternal and child health* has been in operation at Lahore since January. WHO and UNICEF are assisting with this centre, in which the number of student nurses registered reached 85 during the first nine months. It is already clear that the WHO team which has helped to operate this centre has stimulated maternal and child health work and nursing in West Punjab.

Student Nurses in Pakistan prepare for public health work in the villages.

The regional nursing adviser visited the country in June to discuss the need for training public health nurses. Plans were subsequently completed for a nurses' training school in Dacca, for which WHO will supply lecturers and fellowships, and UNICEF will contribute equipment and supplies.*

Eleven fellowships were awarded to Pakistan during the year, of which two were administered by WHO on behalf of UNICEF. The subjects for study included sanitary engineering, public health administration, tuberculosis, and venereal diseases. Two (in venereal diseases) were intra-regional, for study with WHO teams working in Egypt and Iraq, and another was for the course in statistics which was given in Colombo. Medical books were ordered for Pakistan and pamphlets, catalogues, and photostat copies of reprints were provided.

Saudi Arabia: In September, work was started on a building which is to serve as the quarantine station for pilgrims at the port of Jeddah.* This project, assisted by WHO, is more comprehensive than was at first envisaged and includes a general hospital, a school for training nurses and auxiliary personnel, a hospital, and isolation camp for persons suffering from infectious diseases, and a laboratory.

When a plague epidemic in Saudi Arabia and Yemen was reported in July, a WHO consultant went with the Egyptian medical mission to investigate. He reported that there was no plague or cholera in Jeddah, Mecca, Medina or Taif. A detailed plan of operations for the control of plague in the port of Jeddah has been drawn up.

A WHO malariologist made a preliminary survey of the incidence of malaria in the country, and an agreement with the Government was later signed for assistance in a demonstration programme of malaria control.*

The regional adviser on venereal diseases also visited Saudi Arabia to complete arrangements for a project in venereal disease control.* An adviser on public health administration will also be provided.

Under the regular programme, four fellowships were awarded during the year to medical undergraduates to study at the University of Alexandria. Medical books and maps were also provided.

Somalia: The incidence of bilharziasis was surveyed by a WHO consultant in 1951, and a WHO expert in public health co-operated in a survey of the social and economic needs of the country.

Sudan: At the request of the Government, the regional adviser in public health administration visited the Sudan to discuss, inter alia, a ten-year plan for the development of the medical services. To help in this programme, WHO will appoint two professors for the medical college.*

The Government is also considering a BCG campaign and the establishment of a tuberculosis centre, combined with a proposed chest hospital, where auxiliary personnel can be trained. WHO submitted detailed proposals for these projects.

Five fellowships were awarded during the year: two were intra-regional fellowships for study in Egypt, and three for work on quarantine and public health administration in the United Kingdom.

Syria: An agreement was signed by the Government, by which WHO has provided advice in nursing, in the control of bejel and syphilis and in setting up a maternal and child health centre.

The project for controlling bejel and syphilis is designed as a mass control programme and will be carried out with UNICEF aid.*

Both WHO and UNICEF are helping with the maternal and child project.* Staff has been recruited for this centre, which is intended both for demonstrations and for training. It will commence operations in Damascus early in 1952.

During the last four months of the year, a WHO expert has been advising the Government on general nursing problems.*

Progress was made with the proposed joint WHO/FAO project for increasing food production and improving standards of health.*

The regional adviser in tuberculosis went to Damascus during the year to discuss with the Government a demonstration and training project in tuberculosis control. Plans for this project were approved and will be put into effect in 1952.

The consultant on nutrition also made a survey in Syria, where there is much interest in this problem.

Ten fellowships (two under technical assistance) were awarded during 1951; of these, six were intra-regional. The subjects studied included health education, venereal diseases, quarantine, and statistics.

Turkey: In February the tuberculosis demonstration and training centre in Istanbul was formally installed in a permanent building.

A WHO expert in the chemotherapy of tuberculosis, who was appointed at the request of the Government, has co-ordinated his work with that of the tuberculosis centre. Equipment and supplies have been provided for this second project in tuberculosis.*

Plans for a BCG campaign to start in 1952 and to last for four or five years have been drawn up. Its aim is to protect eight million children. The team which will help to organize this campaign will also train 36 local teams, each of which will give an estimated 5,000 injections per month.

The need for greater efforts in maternal and child health was reported by the regional adviser in this subject after a visit to the country. Subsequently, in response to a request from the Government, WHO submitted plans for a demonstration and training centre in maternal and child health to be established in 1952.*

During the year, it was decided to provide the Government with the services of a WHO consultant in venereal diseases for two months. WHO will also provide penicillin and other equipment for a pilot project, which, it is hoped, will be expanded into a mass control programme in 1952.*

The State Veterinary Institute at Ettik has continued as a joint FAO/WHO brucellosis centre.

Twelve fellowships, of which one was financed under technical assistance, were awarded during the year in public health administration, nursing, maternal and child health, epidemiology, and other subjects. Medical literature was supplied.

Yemen: In July, just before the pilgrimage season, the Yemenite Government asked WHO for assistance in combating an undiagnosed epidemic. A WHO consultant accompanied the medical mission which was sent by Egypt to investigate. The presence of plague in endemic form was confirmed in Khawlan province bordering on Saudi Arabia. More than 60 villages were examined and 137 cases of bubonic plague and one of pneumonic plague were found. The patients were isolated in the villages, and six young men from Taig were trained in anti-plague work and put in charge of groups to cover the whole area. The epidemic, officially declared to have ended on September 15, was of sylvatic origin. In 1952, a sanitary inspector will be provided by WHO to help in preventive work.

A WHO consultant made a survey of bilharziasis in Yemen in 1951.*

WESTERN PACIFIC REGION

Australia: The facilities in Australia for training personnel from other parts of the region have been examined, and a public health nurse from the Philippines has already received field training there as part of a WHO fellowship. One fellowship was awarded to a candidate nominated by the Government. Work was continued in the FAO/WHO brucellosis centre.

British Solomon Islands: One fellowship was awarded to the British Solomon Islands.

Brunei: As mentioned in last year's report, among the first of WHO's international staff to be sent to the region were two public health nurses, who went to Brunei in January 1950 under the auspices of WHO and UNICEF. A nurse-educator was also sent to conduct a training course for assistant nurses in the new government hospital.*

The regional adviser on malaria recently visited Brunei to consult with the governmental authorities. As a result of the consultations it was decided that technical personnel of the United Kingdom Colonial Office should make a preliminary survey of the extent of the malaria problem.

The tuberculosis adviser's visits to Brunei in November 1950 and in July 1951 led to plans for a tuberculosis survey combined with a BCG campaign. This work will be conducted on the lines of previous international projects, but will be modified to suit local conditions.

Cambodia: At the request of the Government of Cambodia, a WHO malariologist was sent to Pnom-Penh on October 6, 1950, to start a malaria and insect control project.* He was joined in August 1951 by a sanitarian. The project includes the training of local personnel and the development of a malaria and insect control programme in certain parts of the provinces of Kampot and Kompong-Cham and in the villages on the outskirts of Pnom-Penh. It is hoped that further areas will later become accessible and that the project will be extended to them. Local workers are being trained to carry on after the international team has withdrawn, and as a result of their work an adequate malaria and insect control service should become a permanent feature of the general public health services of the country.

Plans have been made for WHO to assist a demonstration and training programme in maternal and child health,* which is to start on January 1, 1952. A consultant in public health administration will shortly start work in Cambodia. Medical literature was sent to Cambodia during the year.

China: The Regional Director and regional advisers in malaria, maternal and child health, nursing, and tuberculosis visited Formosa (Taiwan) during the year. One project was in operation, and plans were drawn up for a number of others, to begin shortly.

As a result of the visit of the adviser in tuberculosis, it was proposed that WHO and UNICEF should provide an international BCG team of one doctor and one nurse, various items of equipment and supplies, and fellowships. The international team accompanied by the tuberculosis adviser arrived in April 1951 to launch a BCG campaign, which was in progress at the end of the year. In September 1950, at the request of the Government, WHO sent a BCG consultant to visit the BCG laboratory at Taipeh.

A programme of nursing education,* which will provide five nurse educators, to strengthen the National Taiwan University School of Nursing, is being started. Fellowships in nursing education will help to prepare local nurses for teaching positions. This is a development of a teaching programme started by WHO in 1947 when a Formosan nurse was sent to Canada with a fellowship.

As malaria is a most serious public health problem, especially in rural areas, the malaria adviser visited the country in August and again in October when he worked out details of a malaria and insect control project.* The Government had asked for assistance in carrying out this project which will start in the first quarter of 1952 and last for four years.* The WHO team, which consists of a malariologist, an entomologist, and a public health engineer, will not only take part in the project but will also train members of the staff on the Malaria Research Institute who are participating in this work.

A venereal disease project* has been approved and the plan of operations is at present being revised in accordance with WHO recommendations. The problem of recurring bubonic plague in Kingmen and other islands has been referred to WHO, and the authorities concerned have been advised to ask for a short-term consultant to make a preliminary survey and recommend suitable action. Six fellowships were given to Formosa in 1951—four under the WHO programme and two on behalf of UNICEF. The Government has nominated ten further candidates for fellowships.

On the mainland, there has been some disruption in the fellowships programme and some Fellows have been unable to leave the country. The supply of medical literature has continued and the Chinese edition of the "Chronicle of the World Health Organization" has been widely circulated.

Fiji Islands: A fellowship at the Otago University, Dunedin, New Zealand, was awarded to a senior medical officer from Fiji.

Hong Kong: The control of tuberculosis was the main subject of WHO's work in Hong Kong in 1951. Under a joint WHO/UNICEF tuberculosis project which was started, a mobile dispensary and equipment for a diagnostic laboratory and some new clinics were provided. With WHO/UNICEF assistance, a health education project has also been planned, which is intended not only to benefit Hong Kong, but also to serve as a pilot project. One WHO fellowship was awarded to Hong Kong during the year.

Japan: Japan became a member of WHO only in May, and has since taken an active part in the work of the Organization. The Government submitted a list of proposed projects for 1952 and 1953, which were discussed during the second session of the Regional Committee, at which three delegates from Japan were present. Japan took part in the Q-fever survey carried on by WHO and asked WHO for help in preparing a cancer programme.

Korea: In 1951, a Korean doctor, with a WHO fellowship, did graduate work in Canada at the University of Saskatchewan. WHO has continued to co-

operate with the United Nations by providing assistance to the Unified Command in Korea.

Laos: The WHO consultant in public health administration assigned to Viet Nam visited Laos and discussed with the health authorities there how WHO could help the Government with its public health services. A fellowship has been awarded to enable a physician from Laos to take a course in malariology in Lisbon for a period of two-and-a-half months. Laos has also decided to send some Fellows to Cambodia as soon as the WHO-assisted school of nursing there is established. Medical literature was provided.

Malaya: The WHO/UNICEF programme for the training of nurses continued. The BCG campaign in the Federation of Malaya, which was begun in November 1950, was carried on for six months. In this campaign more emphasis was placed on the teaching of local teams than on actual vaccination. Two fellowships for health visiting and for dental nursing were administered by WHO on behalf of UNICEF. Technical advice on brucellosis was given to Malaya, which also took part in the Q-fever survey carried on by WHO.

New Zealand: New Zealand has so far only requested fellowships from WHO, though at one time medical literature was also supplied to the library of the medical school at Dunedin. A further fellowship was awarded.

North Borneo: A WHO/UNICEF team, consisting of a nurse-educator, a public health nurse and a midwife, was sent to North Borneo, in 1950, to improve maternal and child health services in the country, and to train local personnel. In 1951 it started a school of nursing where training in midwifery, including prenatal and infant health care, was given. It also supervised domiciliary practice.

The regional adviser on malaria visited North Borneo during the year and discussed with the authorities a pilot project in malaria control,* for which a three-year plan of operations has been drawn up.

Philippines: Work was continued at the rural health demonstration and training centre which was established in the Philippines in August 1950, with the assistance of WHO and UNICEF. The team supplied by WHO, which consisted of a public health nurse and a consultant on maternal and child health, was withdrawn in August 1951, and the project was taken over by the Government. The WHO/UNICEF project for providing equipment to child care centres has been completed.

The BCG production laboratory at Alabang, built and equipped through the joint efforts of UNICEF, the United States Public Health Service, and the Philippines Government, is now capable of producing all the BCG vaccine required by the Philippines and supplying vaccine for export to neighbouring countries. As a result of the report of the BCG consultant who was sent by WHO to inspect the building and its equipment and to instruct the local staff in the technique of production, as mentioned in the Annual Report for 1950, the laboratory was officially approved by the Organization as a BCG production centre. Facilities for training a WHO/UNICEF fellow in BCG production have been made available at this centre. The Philippines Government has carried out large scale projects in tuberculosis control, including BCG vaccination. This work was intensified in 1950 and 1951 by the International Tuberculosis Campaign, which is being supplemented by a five-year WHO/UNICEF programme.

Planned in 1950, a WHO/UNICEF treponematoses project made some progress during the year. The director of this project was given a short-term fellowship to observe yaws control in Thailand and Indonesia before the project began.

A WHO/UNICEF diphtheria immunization programme has been in operation in several provinces and most cities in the Philippines. Most of the equipment for a toxoid laboratory was received, and a fellowship awarded for training in connexion with this project.

Eight fellowships were awarded during the year, including one administered on behalf of UNICEF and one under technical assistance.

Sarawak: Two nurses were sent to Sarawak in 1950, where they supervised the maternity and paediatric wards until October 1951. Supplies were provided by UNICEF. The nurse-midwife tutor, assisted by a local nurse, developed a programme for domiciliary midwifery and prenatal care. The Government was satisfied with the results of this project,* which, at the end of the year, was being continued by the local matching staff, who were trained in this work by the WHO team.

Malaria, which is prevalent in the rural areas of the country, hampers progress in agriculture and industry. Accordingly, during a recent visit, the malaria adviser held discussions with the health authorities concerning a two-year pilot project designed to train local personnel and to determine an effective and economical method of controlling malaria in the colony. WHO drew up a plan of operation and is providing an entomologist for this programme.*

Singapore: On June 1, 1951, the BCG team which had been working in the Federation of Malaya moved to Singapore for four months. As Singapore already has trained personnel and several tuberculosis centres, the continuity of this work will be assured. The project ended on October 1 and is being carried on by the Government.

Under a programme to help the University of Malaya to build up a first class school of public health which, in due course, may serve the needs of the whole region, WHO will provide seven lecturers. This programme will begin in January 1952.*

The Government has requested WHO to provide a nurse-educator to help raise the standard of midwifery training and improve the midwifery service in Singapore.*

Viet Nam: The malaria and insect control project,* for which plans were made in 1950, was continued throughout the year, with the help of a WHO team consisting of a malariologist and a public health engineer. The latter—assigned to Saigon in December 1950—also helped to train local workers, made surveys of malaria and environmental sanitation, and gave assistance with the Government's housing plans. The malariologist, who arrived in the spring of 1951, besides working in Viet Nam, was also assigned to supervise projects in Cambodia and Laos.

A consultant in public health administration was assigned to Viet Nam in March to co-ordinate the projects administered by the Government in co-operation with WHO and to assist it in developing hospital and public health services.*

At the request of the Government, a specialist in maternal and child health will be assigned to help with plans for improving maternal and child health services and educational facilities.* The personnel for this project will be increased as the need arises and the programme develops.

As a result of the changes made at the Institut Pasteur in Saigon in accordance with the recommendations of the WHO BCG consultant, this laboratory has now been recognized as a BCG production centre, and plans will now be made to support a BCG campaign in Viet Nam.

Medical Women in Greece

Dora Papara, M.D.

In GREECE the practice of medicine by women is no recent development; my thoughts go back and back, almost two thousand years, so that I visualize a cavalcade of women engaged in the healing art. Even in the mythologic period many women were associated with medical care. There were Medea, Akavy, Artemis, and Athene, all of whom were considered goddesses of delivery; Hera, and Helen of Sparta, and the daughters of Aesculapius—Hygeia, Panaceia, Iasso, Aegle, and Acesso, most of them concerned with obstetrics and gynecology.

Coming to the period of recorded history we find that although women were then forbidden to work in medicine, Agnodike put on men's clothing and attended the school of Herophilus. After graduating, still dressed as a man she began to practice medicine; but her colleagues, jealous of her success, inquired about the private life of the great doctor and when her sex was discovered, she was brought before the Tribunal Areopagus. Many important women of that period in Athens helped to prove her innocent of the false charges brought against her; and as a result of her trial and her defense, women have ever since been permitted to practice medicine in Greece. Later, other restrictions were enforced. For instance, to be a doctor of medicine a woman must have passed the climacteric and must have had at least two children.

Among the most famous doctor-midwives was the mother of Socrates. Euripides writes in the Hippolytos (A.D. 293) that the midwives practiced gynecology. Actually instead there existed a number of women who practiced by experience, and sorcerers whose therapeutics consisted in administering various substances such as love potions and many medicines for abortions. In the Iliad Homer reports that: "Blood—Archimede cirrii" which means the bleeding, is treated by the Archimede, who was a doctor-sorcerer of that time—in the period of Alexander the Great. In Alexandria, the intellectual center of Greece, lived Polydaemona, a woman-doctor who knew all the therapeutic formulae to be used in serious illness. Agintini, the daughter of the King of Colchis (northern Greece), and Econion also practiced medicine.

The names of many other medical women are also recorded. First of all is Theano, wife of Pythagoras, the philosopher, to whom Clement of Alexandria refers as the first woman doctor, philosopher, and poetess. She appears to have been an obstetrician, since Sensorius writes about her disagreement with the Iatro philosopher, Evryphon of Cnidus. Theano insisted that a seven-months baby could live; Evryphon believed the contrary. Theano also wrote medical books, few parts of which have been saved; however, there is reasonable proof of her authorship in the writings of Stebon and the letters of Rothopis, as Plato pointed out in his works. Plato gave much information about women doctors and midwives; and Pliny wrote about Olympias, from Thebes, who told of treatments for gynecologic diseases and potions used by women to avoid miscarriages and sterility. Pliny also describes a woman, Salpis, who discussed feminine hygiene and prescribed an ointment for the eye, a medicine to tone the organism, and other remedies; and says that Lais discovered a new drug which would prevent rabies, and was also effective in the treatment of recurrent malaria. Plenius wrote too about Sotera, a famous midwife, who using the name Gynacea published a book which is now in the library at Florence. Another author and doctor, Galen, listed a number of women doctors who were also medical writers, as Elphantis, who treated alopecia; Somnethra Eucrasia, who discovered a drug for the treatment of hypertrophic spleen; and Antiochis Organeia, who used special drugs for the control of hematemesis and diarrhea.

Cleopatra, a doctor, who must not be confused with Cleopatra, Queen of Egypt, was a Greek woman who practiced in Alexandria, and is mentioned

Dr. Papara is associate director of a mental hospital in the Greek Ministry of Health. She has been studying in the United States on international fellowships granted by the Soroptomist International Association and the Commonwealth Fund.

in the books of Galen, of Aetius Amedenos, and of Paul of Aegina. She became famous as a physician and was the author of a number of books.

In the Greco-Roman period Primella also became famous. The marble marking her grave was found in the cemetery where she was known to be buried and is now in the museum at Berlin. At the same time another woman, Valeria Berecyntha, whose marble tombstone is now in the Vatican, was practicing medicine.

Theodore Priscianos, a doctor of the same period, dedicated his third book on women's diseases to a colleague, Victoria, with flattering words as to her knowledge, ability, and feminine charm. He mentioned still another doctor, Leoparda, who discovered a treatment for hydrops, and also Faviola, who opened the first hospital in Italy in 380 A.D.

Aetius Amidinos, the first doctor of the Emperor Justinian, wrote of Aspasia, the wife and the inspirer of Pericles, as a wonderful doctor, and reports all phases and periods of her work; but her own writings have been lost.

In the period of the Greek-Byzantine Empire we have Metrodora, a woman whose writings on diseases of women were found in Florence. At that time a number of women practiced medicine, as Theodosia, Zenais, Tatiana, Sophia, Anastasia the Pharmacolytria ("saving through medication"), Thecla, Febronia, Justina, and Hermione. Because in that period of Greek history everything was connected with the church, all these women became saints after their deaths. Even the Christian Orthodox church accepted these women, and also Salome, the first cousin and mother of Lazarus, as a wise midwife-doctor, as mentioned in the Bible.

In more recent years, when women took a more active part in the social life, we find mention of Trotula, who was the wife of a famous man, John Platoperio, in the eleventh century after Christ. Most authors report two women, Trota and Tratula, but it seems that both names were used for the same woman, a doctor whose medical works are found today in Florence, Leipzig, and Paris. She belonged to the period of the medical school of Salerno, which produced many well known women doctors: Iavela who wrote about Black Bill Mercuriardi, a surgeon and the author of various books about ointments, communicable diseases, and epidemics; and Rebecca Guardena who reported a Jewish woman doctor, Fragisca Romana, whose records and papers, even her diploma dated 1321, have been saved.

Greek medicine was transferred to Rome and from there to Spain, France, and Germany, as Greek civilization was spread by refugees after the fall of the Greek Empire, through Europe and later throughout the world. Shelley says: "Our laws, our science, our arts, all have their roots in Greek civilization," and the tradition of women in medicine thus goes back two thousand years to the golden period of Greece and Greek civilization.

After the golden age, Greece (for hundreds of years) was ravaged by wars, invasions, occupations, and slavery. Under the cruelest of despots the people were entirely occupied by the struggle for survival and bare existence. Among all the other miseries, Turkish occupation left behind a tradition against women. Woman became the slave of man and the servant of the house. At last, however, after the Greek revolution in 1821, and subsequent events culminating in the liberation of northern Greece in 1896, Dr. Panagiotatu, the first woman doctor from Greek territory proper, studied in the Greek University and practiced hygiene and microbiology in the Greek community of Alexandria. Dr. Calopathaki was the first Greek woman doctor to study in America. She came to Harvard and there, in collaboration with Dr. Anna Catsigra, wrote her thesis on "Gastro-intestinal Disorders of Babies." These three are the women doctors who worked so tremendously and helped both morally and materially in the War of 1897 for the liberation of the rest of Greece, a goal which was finally reached in 1912.

Two years later, Europe was plunged into the First World War. Then again misery and the struggle for survival cut the Greeks off from any intellectual pursuits. The year 1922 brought disaster to Asia Minor, in which a million Greeks were killed and a million and a half refugees fled to Greece where they were absorbed among the five million natives. Further intellectual progress was made only by superhuman effort. In many cases women proved as capable and active as men, in spite of superstitions against their freedom. Women doctors demonstrated their capabilities.

Today in the Medical Association of Greece there are listed 290 medical women: 75 in general medicine; 107 in microbiology; 30 in pediatrics; 41 in obstetrics and gynecology; 16 in internal medicine; 5 in tuberculosis; 6 in ophthalmology; 4 in dermatology; 3 in roentgenology; 1 in surgery; 1 in orthopedics; and 1 in neuropsychiatry.

In the University there are enrolled a large number of women medical students; but after graduation, most of those who marry will be obliged to discontinue study and practice. Although the old obstacles of Turkish origin no longer exist, in modern Greece a woman must go back to the life where her entire personality and energy are engaged in housekeeping and family management, for today housekeeping in Greece, as in all Europe, is very

difficult and the financial obstacles are practically insurmountable.

Of the women who continue their medical studies to the end of the course, even though they marry, few will practice afterward. Some of course must continue, and they make up the small number of women doctors in Greece. They are mostly the women who must support themselves and their families. At the same time each woman has to face keen competition, so that three-fourths of her energy are spent in the struggle to maintain a place.

The fact that in Greece women have no vote and no representatives in Parliament augments their difficulties. When a girl is born in Greece, especially in the country, the father is ashamed to confess it to his friends. On the contrary, when a boy is born, the father shoots in the air, so that all may know he has a son.

The situation of women doctors is a little better than that of other professional women in Greece; but their work is still held to a low level. In the Ministry of Health, there are four women who are directors: two are directors of microbiology laboratories; one is director of the dental laboratories; and one is associate director of the mental hospital. In the rating equivalent to American instructors, there are four microbiologists. In positions comparable to the American resident doctor, there are three in microbiology, one in obstetrics, one in surgery, one in ophthalmology, one in internal medicine, one in pediatrics, and one in dentistry. In the health services there are five women doctors. A recent letter from Greece reports that two women have been elected assistant professors, one of experimental pharmacology and one of clinical physiology; and this augurs well for the future of medical women in Greece.

Acknowledgement is gratefully given to Dr. Pournaropoulos, Assistant Professor of the History of Medicine in the University of Athens for valuable information used in this article.

MEDICAL PRACTICE AROUND THE WORLD

A Physician's Sojourn in Puerto Rico

JUST SIX HOURS' TRANSPORTATION from ice-bound New York in January to a beautiful emerald-green island with warm sun and gentle breezes! This is Puerto Rico, America's problem child. Puerto Rico teems with life, human and parasite, and survival depends on one's ability to control insects and parasites. Thanks to DDT, the Norteamericanos can maintain a sort of status quo with ants, cockroaches, and mosquitoes, but insecticides are often too expensive for the Puerto Ricans. Mosquito nets are used by most of those who can afford them.

To Ryder Hospital in Humacao come little children like the little girl pictured here with a North American of the same age—seven years. Beautiful dark-eyed children with long curling black eyelashes, they are listless, pale, and feeble. Their frail little arms and legs, prominent abdomens, and stunted growth are characteristic. They are very easy patients to deal with and offer no resistance to examination.

Ryder Hospital in Humacao.

Parents bring them in immaculately clean, dressed in their best starched dresses with pink or blue satin panties and gay slips; they complain of stomach aches, diarrhea, and lack of appetite. A stool examination reveals various types of ova; hookworm, roundworm, tapeworm and so forth. The

children go barefoot and live mostly on beans and rice, so they are easy victims of parasites.

Tuberculosis is also more prevalent here than in the States, as are other diseases of the North American. The Puerto Rican's life expectancy is in the neighborhood of 55 years, thus he is spared some of the cancer and degenerative diseases.

At the Ryder Memorial Hospital 80 to 100 patients are seen daily; men, women, and babies pour into the clinic from eight o'clock each morning. Some climb down from the hills over narrow rocky trails and are on their way for several hours. Others come by bus from the crowded villages. In addition to outpatient clinics, a 60-bed hospital is maintained, so that the three doctors in attendance are more than busy. Good x-ray examination is available, there is a laboratory for urine and blood tests, and a pharmacy of sorts. No electrocardiogram, proctoscopic or cystoscopic examinations can be done. Maternity cases can be adequately cared for as can some surgery and some general medical cases, such as hookworm and gastrointestinal and respiratory infections. Most of the other patients must be referred to the overcrowded insular hospitals for further diagnosis and treatment.

For a physician used to the facilities of our metropolitan hospitals, this is an unsatisfactory type of medical practice. However, when one realizes that there is nothing else available for most of these people, the work assumes a new dignity. Nearly 90 percent of the women would have their babies at home without medical aid if Ryder were not there to receive them. The hospital is beautiful, of stucco construction with wide and graceful archways, surrounded by spacious gardens filled with tropical vegetation.

Puerto Rico is called America's little Switzerland. Its abrupt hills and valleys remind one of Lugano. Puerto Rico's inability to grow sufficient food to feed its population is not countered by industrialization and tourist expenditure, as in Switzerland, so that it has not the necessary money to buy food elsewhere. This, added to a rapidly increasing overpopulation, accounts for disease and malnutrition.

Puerto Rican (R.) and North American children, both seven years of age.

The mortality rate decreases with improved sanitation and more adequate health facilities, and the birth rate increases. The problem of overpopulation is a difficult one. Three methods to combat it are current: (1) emigration of young Puerto Ricans to the U.S.A.; (2) contraceptive measures; (3) sterilization of selected cases. These methods are inadequate because emigration of able-bodied Puerto Rican youth depletes the country of its best elements; contraceptive measures are not feasible owing to overcrowding and lack of privacy and sanitary facilities; and sterilization, although practiced in many of the hospitals, is available only to women with several children, involves a stay of several days in the hospital, as well as considerable expense.

The Mission hospitals and others are concerned with these problems and more and more people are trying to do something about the poor conditions. More interest in helping is manifest; eventually there must be some solution. Let us hope for a brighter future for these underprivileged people.

MARGARET M. WURTS, M.D.

American Medical Women's Association

MESSAGE FROM THE PRESIDENT

How We Function

THE AMERICAN MEDICAL WOMEN'S ASSOCIATION like most organizations of its type, is governed by its Constitution and By-Laws, which may be modified from time to time, by fixed procedure, to meet the changing needs of the Association. By the time you read these pages, you will have received a copy of the Constitution together with a new edition of the Directory. This Constitution is a most enlightening document and one with which each member should be familiar. It contains information regarding the purposes for which we exist and the ways in which these purposes are carried out. Many of you know this, but for our newer and younger members, I wish briefly to point out some important facts which may help you to understand how we function.

The business of the Association is carried on by the Executive Committee and the Board of Directors under the general supervision of the President. The Executive Committee consists of the officers of the Association and the chairman of the Finance Committee. The Board of Directors is a large body, consisting of the members of the Executive Committee, the ten Regional Directors, the chairmen of the Standing Committees, and a delegate from each Branch who must present credentials from the local secretary. This is truly a democratic governing body.

In any organization such as ours, with a large membership and widely scattered members, some mechanism for functioning must be set up. Accordingly we have divided the country into ten Regions, with a Director for each Region who is elected by ballot for a period of three years. It is the duty of each Director to organize her Region into states and to appoint representatives in these states to cooperate in carrying out the program of the Association. This past year a new plan was inaugurated, permitted by constitutional change, whereby the Second Vice-President was made responsible for the work of the Regional Directors and the Organization and Membership Committee. This is a great step forward and eliminates duplication of effort. Credit is due to Dr. Camille Mermod who so ably carried out this program during the past year.

Through the Branches we function most effectively. According to our Constitution "A Branch is a duly accredited local group of medical women, at least eight in number, all of whom are members of the American Medical Women's Association." We have thirty active branches. Nine branches are now inactive, in most instances due to an insufficient number of women physicians in the area. The organization of the Junior Branches in medical schools is another important step forward. Dr. Mabel Gardner and her committee deserve recognition for this fine accomplishment.

The Standing Committees of the American Medical Women's Association, eighteen in number, are authorized by the Constitution, which definitely outlines their responsibilities. In addition, the President or the Board of Directors may appoint special committees to act on emergency or temporary problems. THE JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION, under the supervision of the Publications Committee, is not only an excellent journal, but one which through its pages contributes to the work of the Association in many ways. Dr. Ada Chree Reid, Editor-in-chief, has earned great commendation.

Individual members must also be considered. There are various types of memberships to meet individual needs: Active, Life, Memorial, Honorary, Associate, and Junior. A committee is investigating the question of Emeritus membership.

Such is the variety of ways by which the Ameri-

can Medical Women's Association carries on its work. These diversified activities are united and correlated at the Annual Meeting, held just prior to the Annual Meeting of the American Medical Association. Reports are made by all officers, chairmen of committees, and branches. At this time, all new business is presented for action. The Board of Directors holds at least three meetings each year, one just before the Annual Meeting, one immediately following when the new Board holds its first meeting, and one in the Mid-year. There is one key person lacking in this outline of functions, namely an Executive Secretary. We have the authority to engage such a person. Her duties are outlined in the By-Laws. A tremendous amount of work and effort is lost each year, due to the yearly change of national and local officers. This could be correlated and organized by an Executive Secretary with great benefit to the Association. Let us keep this need ever before us.

Read the Constitution with greater interest and understanding. This is your organization. We may well be proud of its accomplishments. Help it continue to function adequately.

Evangeline E. Stenhouse

NEW MEMBERS

District of Columbia

Ann Margaret Allen, M.D.—3613 Norton Place, N.W., Washington. *Ire. 7, 1925. N & Path*

Massachusetts

Clementine C. McKeon, M.D.—21 Winthrop Road, Lexington. *La. 1, 1932. P*

Missouri

Mary C. Colglazier, M.D.—1105 West 47th Street, Kansas City. *Kan. 2, 1945. I*

L. Marian Lambert, M.D.—Princeton. *N.Y. 20, 1943. GP*

Mary Northcutt Newman, M.D.—Cassville. *Ark. 1, 1937. GP*

Esther Beatrice Winkelman, M.D. — 6700 Paseo, Kansas City. *Kan. 2, 1935. GP*

New Jersey

Anna Theresa Onorato, M.D.—160 Lawrenceville Road, Trenton. *Pa. 9, 1944.*

Caroline S. Cook, M.D.—64 Grove Street, Somerville. *Pa. 13, 1941.*

Elizabeth L. Coultas, M.D.—1 Madison Avenue, Madison. *Md. 1, 1947. ObG*

New York

Rebecca Greene Solomon, M.D.—1148 Fifth Avenue, New York. *N.Y. 6, 1948. P*

Ohio

Ilka Adler, M.D.—10515 Carnegie Avenue, Cleveland.

Texas

Mary Pauline Chiasson, M.D.—261 E. Circuit Drive, Beaumont. *La. 1, 1936. Anes*

Katharine P. Bennett, M.D.—3108 St. Johns, Dallas. *Tex. 4, 1943. ObG*

May Bradley Bachtel, M.D.—5504 La Branch, Houston. *Tex. 2, 1939. ObG*

Lois F. Jordan, M.D.—Gaston Avenue, Dallas. *N.Y. 45, 1943. ObG*

Christine Wood Martin, M.D.—115 Dover Road, San Antonio. *Wis. 5, 1942.*

Corinne Westphal, M.D.—1300 8th Street, Wichita Falls. *D.C. 1, 1934. Oph*

SEMINAR ON REHABILITATION

A Seminar on "The Rehabilitation of Children" will be given at the New York University Post-Graduate Medical School, by the Department of Physical Medicine and Rehabilitation October 20-24. This full time course will include lectures, demonstrations, clinics, parent meetings and evaluation conferences. It is open to all physicians. Tuition fee is $30. Further information may be obtained from Dr. George G. Deaver, Director Children's Division, Institute of Physical Medicine and Rehabilitation, 400 E. 34th St., New York 16. A similar course will also be offered from January 19-23, 1953.

RADIOACTIVE CORTISONE

Radioactive cortisone for use in medical research is being manufactured with the aid of funds from the National Institute of Arthritis and Metabolic Diseases, under the supervision of the Public Health Service. It has not been produced hitherto in sufficient quantity for research studies.

The cortisone will contain radioactive carbon, which will enable it to be traced through the bodies of experimental animals to learn how it produces its effects in health and disease. The product will be distributed to qualified scientists who submit formal research proposals to the National Institute of Arthritis and Metabolic Diseases, Bethesda, Md.

OPPORTUNITIES FOR WOMEN IN MEDICINE

AWARDS AND GRANTS

A total of 1,695 research grants and 544 fellowship awards were awarded in 1951 by the Public Health Service through the National Institutes of Health. The program is designed to support research in health, medicine, and allied fields; and the major objectives are to expand research activities in universities and other institutions, especially in small colleges, to encourage research in neglected areas, and to train scientific personnel. There are no restrictions on investigation or publication.

The grants are made by the Surgeon General on the recommendation of the National Advisory Councils on Arthritis and Metabolic Diseases, Cancer, Dental Research, Health, Heart, Mental Health, Neurological Diseases, and Blindness. Special consultants are appointed to study sections, to review applications and to survey research in their fields. Requests for application blanks or further information should be addressed to the Division of Research Grants, National Institutes of Health, Bethesda 14, Maryland.

FULBRIGHT AWARDS

The program authorized under the Fulbright Act is concerned with educational and cultural exchange in a broad sense and includes scholars and specialists in the entire range of academic and professional fields. Funds for the support of the program are derived from foreign credits acquired by the United States from the sale of surplus property left abroad after World War II. Thus the extent and duration of the program varies according to the money available in any given country, but it may not exceed one million dollars a year, nor a total of 20 million in any country.

Awards fall into four categories: research, lecturing, teaching, and study. Applicants must be citizens of the United States and able to provide certification of good health. Requirements for previous education and experience vary with the type of award sought. Final selection of candidates is made by the Board of Foreign Scholarships on the recommendation of a number of co-operating agencies.

At present 22 countries are participating in the program. Applications for awards for East Asia and the Pacific are accepted each year from March 1 to April 15; for Europe and the Near East (including Colonial Dependencies of the United Kingdom) from June 1 to October 15. Awards are usually for one academic year.

It is stressed that final selection of candidates may be influenced by such factors as the varying requirements of the host countries and institutions, the age of the candidate, and the ratio between the number of awards offered in a given country and the number of applicants. The co-operating agencies are prepared to advise persons in advance of application, and applicants who have not been accommodated are encouraged to reapply in later competition. General information on all grants offered under the United States Educational Exchange Program may be obtained from the Division of Exchange of Persons, Department of State, Washington 25, D.C.

OPPORTUNITIES IN THE FOREIGN MISSION FIELD

An experienced obstetrician and gynecologist will be needed in the Christian Medical College at Vellore, India, for the year beginning July 1953, on a temporary relief basis. Room and board are supplied, but not transportation. Application should be made to Dr. H. M. Lazarus, Director, Christian Medical College, Vellore, South India. A letter of recommendation should be sent from your local church pastor or mission board.

* * *

Those interested in receiving further data regarding foreign missions in general should apply to Dr. D. N. Forman, Secretary, Christian Medical Council for Overseas Work, 156 Fifth Avenue, New York, New York.

* * *

Dr. E. W. Wilder, Secretary of the Christian Medical Association of India, Pakistan, Burma, Ceylon—Nelson Square, Nagpur, India, writes that there is need for women doctors in India, and he has constant requests for "national" doctors. Presumably this refers to doctors in government positions rather than in the missionary field. Further information may be obtained by writing to him.

INTERNIST WANTED

Woman internist to associate with long established certified internist in San Francisco. Salary to start, with percentage partnership in one year. For information write to J.A.M.W.A., Box 7521, 2 Lexington Avenue, New York 10, N.Y.

ALBUM OF WOMEN IN MEDICINE

HOMA SHAIBANY, M.B.B.S.

First Woman Surgeon of Iran

THE FIRST, and still the only Persian woman surgeon, Dr. Shaibany, was born in Teheran, where her father, a Cambridge graduate, served his country for many years, and it was he who inspired her to study medicine. Thus she grew up with the ambition to become a doctor and so be able to help the sick women of her country. After graduating from the American Mission School in Teheran she was, in 1930, given a scholarship by the Persian Government to study medicine in England. She was the first woman to receive this scholarship and the first Persian woman to go to England for medical study. She passed the matriculation examinations at London University, but found it difficult to obtain admission to the Faculty of Medicine. At that time London University was considered the best medical center in England; but unfortunately only two colleges accepted women students and with many English women on the waiting list it was hard for a foreign woman to gain entrance. Homa Shaibany was one of the lucky few. In her preclinical years she proved so brilliant in human anatomy and morphology, embryology, and neurology, that her professors advised her to postpone clinical study and take a degree in these subjects. Accordingly she remained at the College, working in the Department of Anatomy under Prof. Sir Elliot Smith, Prof. J. P. Hill, and Prof. J. Kirk. In 1936, London University gave her the degree of B.Sc. in human anatomy and morphology, with honors, the tenth student and the first woman to receive this degree from the University since its foundation. She then returned to clinical work in the hospital, took obstetrics at the Rotunda Hospital, Dublin, and, in 1939, received her licentiate to practice medicine from the Royal College of Physicians and was made a member of the Royal College of Surgeons. Later, London University gave her the degree of M.B.B.S., which is equivalent to M.D. in the United States.

HOMA SHAIBANY, F.R.C.S.; M.B.B.S. (Lond.); B.S.C. (Lond.); D.T.M. (Liverpool); M.R.C.S.; L.R.C.P.

By that time the international situation had become grave and she hastened to the School of Tropical Medicine, Liverpool, for study, before returning home. It was too late. By the time she received her diploma, Italy had entered the war and she was barred from going to Persia. There was great shortage of doctors in English hospitals and Dr. Shaibany took a post as house surgeon in Redlands Hospital for Women, Glasgow, and later as

house surgeon at Nuneaton Emergency Hospital, one of the first bases for casualties from the heavily bombed towns of Coventry and Birmingham, where she remained until the hospital was bombed and was abandoned. From there she went to Addenbrooks Hospital, Cambridge; Nottingham Hospital for Women; St. Mary's Hospital for Women, Manchester; and Hospital for Children, Southampton; and for the last two years of the war served as resident surgeon at St. Leonard's Hospital in the East End of London, a district devastated by high explosives dropped by German raiders. Many a time, after a heavy raid, casualties were brought to the hospital by the hundreds. Frequently Dr. Shaibany and her team operated all through the night, while bombs fell about the hospital, shaking its walls.

Dr. Shaibany continued at St. Leonard's for a time after the war ended and then resigned in order to work for the fellowship of the Royal College of Surgeons of Edinburgh. Finally, in 1948, she returned to Persia to serve her own people. She found her homeland completely changed and was at once confronted with great opposition from the men gynecologists and surgeons in Teheran. A group of them had secured the main posts in the recently established University and had set up rules which debarred newcomers. Thus Dr. Shaibany was shut off from any teaching post in the University or in its hospitals. Persia is a Moslem country and Persian women still prefer to go to a woman doctor. Many of them would rather die than consult a man. Dr. Shaibany was a pioneer in the field in Teheran and like other pioneers found many obstacles.

Three years ago, Princess Shamse, elder sister of the Shah and head of the Persian Red Cross, asked Dr. Shaibany to equip, organize, and administer for the Red Cross a hospital for casualties and emergency surgical cases. Up to that time there had been no such special hospitals in the country. A Red Cross building in the slum area of Teheran was converted into a 40-bed hospital with a large outpatient department. Nearly two years were spent in organization and in getting equipment from abroad, but finally Dr. Shaibany succeeded and the hospital was opened with all necessary apparatus of the most modern type. As director and chief surgeon of the hospital she worked hard for nearly two years, using her immense experience in wartime surgery and making the hospital a model one. It became the pride of the Persian Red Cross, and as its reputation increased its outpatient department was crowded. Paralleling this, unfortunately, the hostility of the men doctors also increased, and eventually the situation became so difficult that under the strain of worry and hard work Dr. Shaibany's health gave way. She resigned from the hospital, went to Scandinavia to recuperate, and after a few months was able to return home and to begin private practice. Now she contemplates raising funds to open a hospital of her own, so organized that the fees of the private patients will cover the costs of those who must have free care.

We wish her all success and good luck in her plans and we hope she will secure means to give help to the poorer patients in such dire need.

MIRIAM FAHIMI, M.D.

AWARDS UNDER THE FULBRIGHT ACT. 1953-1954

University Lecturing . . . Advanced Research

in

Austria, Belgium, Luxembourg, Denmark, Egypt, France, Greece, Iraq, Italy, Japan, Netherlands, Norway, Pakistan, Turkey, Union of South Africa, United Kingdom and Colonial Dependencies.

This competition is specifically for university lecturing and post-doctoral level research. Graduate students desiring to enroll for courses abroad or to pursue a directed program of studies at the pre-doctoral level should apply to their local Fulbright adviser or directly to the Institute of International Education, 1 East 67th Street, New York, New York, or to the Committee on International Exchange of Persons, 2101 Constitution Ave., Washington 25, D.C. Applications must be postmarked no later than October 15, 1952.

News of Women in Medicine

Canada: Dr. Pearl Christie-Dowling of Calgary, Alberta, is president of the Federation of Medical Women of Canada for 1952. Dr. Christie-Dowling presided at the meetings of the Federation held in Banff, Alberta, in June in conjunction with the annual meeting of the Canadian Medical Association. Dr. Christie-Dowling has practiced pediatrics in Calgary since 1944. She went to Calgary from Detroit, where she had been practicing before returning to her birthplace, Calgary.

Dr. Elinor F. E. Black, first Canadian woman ever elected to Britain's Fellowship of the Royal College of Obstretricians and Gynecologists, has been promoted from assistant professor to professor of obstetrics and gynecology, University of Manitoba. She is also chairman of that department. She is the only woman chairman of such a department in a Canadian university.

Dr. Anna Brown, a graduate of the University of Toronto, is working with Dr. T. A. Watson, Clinical Director of the Cancer Commission for Saskatchewan, Canada. In the new treatment unit at the University of Saskatchewan, Dr. Brown assists with treatment of cancer, where the new cobalt bomb is being used. The cobalt bomb is 300 times more powerful than radium, 6,000 times cheaper.

* * *

Italy: The officers of the Association of Italian Women Physicians, Milan, are: Dr. Myra Carcupino Ferrari, *President;* Dr. Jolanda Tosoni Dalai, *Vice-President;* Dr. Maria Palazzoli Selvini, *Secretary;* Dr. Edmea Pirani, *Treasurer.*

* * *

Netherlands: Dr. Elise Sanders of Amsterdam received the royal decoration called "officer to the order of Oranje-Naussau" on the occasion of her seventieth birthday, in honor of her distinguished career as a gynecologist.

Dr. Tibout of Amsterdam has been appointed a teaching psychoanalyst at the Psycho Therapeutic Center in Topeka, Kansas.

* * *

North Ireland: There was a meeting of the Medical Women's Association, North Ireland, in March. Case histories were given by Dr. Muriel Frazer, a pediatrician and district surgeon, St. John's Ambulance Brigade; and by Dr. Elizabeth Morre and Dr. Lila Robb. Short talks were given by Dr. Corbett, Dr. Lynn, and Dr. McKee.

DR. ESTHER AMMUNDSEN

Denmark: Dr. Emma Vestergaard has been named Chief Psychiatrist, Forensic Department of the Police, Copenhagen.

Dr. Esther Ammundsen has been appointed Commissioner of Health in Copenhagen. She received her medical degree in 1933, and specializes in internal medicine. In 1945 she was chief of the Danish Red Cross Department of Allied Refugees. In 1947 she was chief of the Red Cross campaign against tuberculosis in foreign countries.

* * *

At a recent meeting of the Ophthalmological Society in Copenhagen, Denmark, Dr. Elise Vesterdal gave an account of the treatment with ACTH or cortisone of 111 patients suffering from diseases of the eyes. She found that cortisone given locally was highly effective in various diseases of the eye, including allergic conjunctivitis, nodular episcleritis, sclerokeratitis, and mild cases of acute iritis. A great advantage is the absence of those complicating ill-effects which these preparations have provoked when given in comparatively large doses for diseases in other parts of the body.

* * *

China: Dr. Tsae Kwong is at the Margaret Williamson Hospital, Shanghai, China. The Chinese government appreciates the work of the hospital, and personnel and funds are being provided to make it an "experimental hospital for East China women and child care."

Women's Medical Society of New York State

DR. MADGE C. L. MCGUINNESS, director of physical medicine at Misericordia Hospital, received the 1952 award of the Women's Medical Society of New York State. She was honored for her efforts in advancing the interests of women in medicine. Dr. McGuinness is a specialist in physical medicine and rehabilitation and chairman of the special committee on physical medicine of the New York County Medical Society. She is a member of the House of Delegates of the Medical Society of the State of New York. The annual meeting of the Women's Medical Society of New York State was held on May 12. The scientific meeting was presided over by DR. ISABEL M. SCHARNAGEL of New York. "The Diagnosis and Treatment of Occlusive Vascular Diseases of the Lower Extremities" was discussed by DR. TERESA MCGOVERN, instructor at New York University Medical Center. "The Present Status of Newer Anti-Microbial Agents" was presented by GLADYS HOBBY, Ph.D., of the Department of Bacteriology, College of Physicians and Surgeons. DR. MARGARET P. SYKES of the chemotherapy department of Memorial Cancer Center, gave a paper on "Trends in Therapy of Lymphomas and Leukemias." New officers elected at the meeting were DR. ELIZABETH VUORNOS, *President;* and DR. ANNA SAMUELSON, *Secretary.*

The annual meeting of the California Medical Association was held in Los Angeles, April 27-30. Among the speakers was DR. EDITH L. POTTER, associate profressor of pathology, Department of Obstetrics and Gynecology, University of Chicago.

MAJOR RUTH E. CHURCH, Army Medical Corps, believes that training programs, civilian and military, concerned primarily with women, should take biological trends into account. She warns that recruitment now of young women who otherwise would be going into schools for higher education and into nursing schools could jeopardize the supply of skilled women for many years to come. Planning for the use of married women's services in any mobilization program should not be done without consideration of the rising birth rates. She makes two general suggestions for maintaining a constant supply of skilled women to meet an emergency mobilization: expanding the age span for training women for nursing, teaching, and other skilled work, so as to include women who have had their families and are now free to study for a career; and placing more emphasis on the training of older women for semi-skilled operations, such as practical nursing.

Notes from the Convention of the Medical Society of the State of New York

DR. ROSE M. LENAHAN and Dr. Paul W. Searles, Buffalo, presented a paper on "Changes in Skin and Rectal Temperatures during Surgical Anesthesia." Dr. Lenahan is instructor in anesthesia at the University of Buffalo School of Medicine . . . "The Influence of Prophylactic Therapy on Spinal Headaches in Obstetric Patients" was discussed by DR. GERTIE F. MARX and Dr. S. G. Hershey, New York. Dr. Marx is associate anesthesiologist, Beth Israel Hospital, and visiting anesthetist, Willard Parker Hospital, New York . . . DR. KATHLEEN CAWTHORN and Dr. George Lewis, New York, presented a paper on "Tinea capitis; Has there been Recent Significant Progress in Therapy?" . . . "Occupational Disease Diagnosis" was discussed by DR. MAY R. MAYERS, chief of the medical unit, Division of Industrial Hygiene and Safety Standards, Department of Labor, State of New York . . . DR. JANET BALDWIN, associate professor of pediatrics, New York University College of Medicine, took part in the color television program "Clinic on Congenital Heart Disease." . . . Among the women who presented scientific exhibits were DR. JANET TRAVELL, DR. JOSEPHINE SUESS, DR. JACQUELINE CHEVALLEY, DR. NAOMI DESOLA POOL, DR. HELEN O. CURTH, and DR. MARGARET M. KLUMPP.

DR. LYDIA G. GIBERSON, New York, recently spoke before a combined meeting of the Montreal Personnel Association and the Women's Personnel Group of Montreal. She spoke against the "stuffed shirt" approach in executives, praised the art of persuasion, and expressed the thought that consideration of human dignity matters more than pay, promotion, or working conditions. Dr. Giberson, a graduate of McGill University Medical School, is personnel adviser at the Metropolitan Life Insurance Company and an associate editor of *Industrial Medicine,* the magazine of the Association of Industrial Physicians and Surgeons.

DR. KATHARINE BUTLER, assistant professor of clinical medicine, Cornell University Medical College, has been elected to the Board of Trustees of Mount Holyoke College, of which she is a graduate.

DR. DOROTHY E. JOHNSON, president of the Philadelphia chapter of the American Association of General Practitioners, has been elected fourth vice-president of the Pennsylvania State Medical Society.

At the April meeting of the Women's Medical Society of Washington, D. C., DR. ELOISE W. KAILIN discussed the subject of allergy, and answered questions posed by the doctors present.

At the Fifth American Congress on Obstetrics and Gynecology honorable mention for a scientific exhibitor was given to Dr. Elisabeth Larsson, Dr. Milo Brooks, and Dr. Robert F. Chinnock of the College of Medical Evangelists, Los Angeles, California. The exhibit "Care of the Premature Infant," discussed care of the mother during labor, management of delivery of the premature infant, and nursery care.

NEWS FROM THE BRANCHES

Branch Eleven, Cincinnati, Ohio

A dinner was held May 13 by the Cincinnati Medical Women's Club at the Cincinnati Country Club in honor of the senior medical students at the University of Cincinnati College of Medicine. Following dinner, travel films of Mexico were shown by Dr. Ralph Good.

Branch Fourteen, New York, New York

The annual spring dinner and business meeting of the Women's Medical Association of New York City was held April 30. Dr. Julia Lichtenstein presented the candidates for the annual awards for scholastic excellence. They were: Mrs. Mary Forman Kaufman, State University of New York College of Medicine, City of New York; Mrs. Rebecca Notterman, New York University College of Medicine; Miss Marianne Wolff, Columbia University College of Physicians and Surgeons; Miss Lila Greenwald, New York Medical College Flower and Fifth Avenue Hospitals; and Miss Virginia Weeks, Cornell University Medical College. The guest speakers were Dr. James MacCormack, Dr. Jean Curran, and Dr. Currier McEwen. Dr. MacCormack, associate dean of Columbia University College of Physicians and Surgeons, spoke on the subject of "Medical Research and the Medical School." Dr. Curran, dean of State University of New York College of Medicine, discussed "Internships and Residencies," and Dr. McEwen, dean of New York University College of Medicine, discussed the "Introduction of Medical Students to Social and Environmental Factors Involved in Practice."

Dr. Elaine Ralli, chairman of the Nominating Committee, announced the following officers for the years 1952-1954: Dr. Leoni N. Claman, *President;* Dr. Jean Corwin, *First Vice-President;* Dr. Louise Dantuono, *Second Vice-President;* Dr. Marcelle Bernard, *Secretary;* and Dr. Marguerite Sykes, *Treasurer.*

THESE WERE THE FIRST

Dr. Maria Montessori was the first woman to receive a degree in medicine from the University of Rome, and in 1911 she was appointed "Professoressa" of that institution. Her work in experimental psychology and the care of the mentally deficient led to the founding of the Scuola Ortofrenica, of which she was directress for two years. The Montessori method has been popular in the United States.

Dr. Alma Dea Morani received the first fellowship in plastic surgery ever granted a woman in the United States. In 1941 Dr. Morani was the only woman member of the Society of Plastic and Reconstructive Surgery.

Dr. Elizabeth Garrett-Anderson received her diploma from the Society of Apothecaries in 1865. In 1908 she was elected Mayor of Aldeburgh, her native town, the first woman mayor in England. Dr. Garrett-Anderson pioneered for the advancement of women in medicine, and served during World War I.

Dr. Anna Forest Rowe founded the Lucretia Mott Dispensary and Infirmary, the first hospital for women and children in Brooklyn, New York. She graduated in 1880 from the Woman's Medical College of the New York Infirmary for Women and Children, and was one of the first women members of the King's County Medical Society.

Dr. Lucinda B. Hatch of Portland, Maine, was appointed clinical instructor in obstetrics at Maine Medical College of Bowdoin College, the first woman to be appointed on the staff.

Dr. Sarah J. McNutt, graduate in 1877 of the Woman's Medical College of the New York Infirmary, was the first woman admitted to the American Neurological Society. Her thesis was published in the *American Journal of Medical Sciences,* January 1885.

Dr. Sara Tew Mayo was the first medical woman to receive the loving cup awarded annually by the newspaper, *Times-Picayune,* in New Orleans, for outstanding civic service. Dr. Mayo was one of the women physicians who founded the New Orleans Dispensary for Women and Children in 1905; which institution now bears her name.

Dr. Blanche Norton in 1921 was awarded the Greek War Cross for Near East relief work in Constantinople and Trebizand, and is said to have been the first woman physician to receive this decoration.

—Elizabeth Bass, M.D.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION

The International Tour

All members planning to participate in the International Tour are urged to contact the undersigned immediately so that their reservations may be checked, and directions regarding immunizations, visas, and other necessary procedures may be outlined. Members in good standing will receive credentials as official delegates which will be helpful in preparation of income tax returns. Any questions relative to social and other affairs will be gladly answered. We hope that the American Medical Women's Association will be represented by a large delegation and I am sure all will enjoy the contacts made with medical women of other countries on this Friendship Tour.

Cordially,

Ada Chree Reid

ADA CHREE REID, M.D.
President

BOOK NOTICES

(Editor's Note:—These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of the JOURNAL.)

DIABETES AND PREGNANCY. By Ralph A. Reis, M.D., F.A.C.S.; Edwin J. DeCosta, M.D., F.A.C.S.; M. David Allweiss, M.D. Publication Number 158, American Lecture Series. A Monograph in American Lectures in Gynecology and Obstetrics. Edited by E. C. Hamblen, M.D., F.A.C.S. Pp. 78. Price $2.50. Charles C Thomas, Springfield, Illinois, 1952.

This monograph has been very well prepared. It has been divided into numerous chapters with subtitles and a summary for each chapter, and is very comprehensive in its reviewing of various opinions that have been expressed.

Prenatal care of the diabetic patient is discussed in great detail. Reasons are given for different types of delivery, and care of the infant after delivery is outlined. The work presents the two main, and divergent, treatments of diabetes. The procedure the authors follow is a middle course and individualizes the treatment of each patient. It is stated that the patients described in the book have diabetes of short duration, a problem different from that of patients who have diabetes for a long time.

Here is a very good guide for students and general practitioners.

—Ann Gray Taylor, M.D.

THE DOCTORS JACOBI. By Rhoda Truax. Pp. 270. Price $3.50. Little, Brown and Company, Boston, 1952.

Many would find this narrative more interesting than a work of romantic fiction; it holds the reader's attention without let-up from beginning to end, entertaining without apparent effort as it pushes aside the doors leading to the professional world, and showing two unusual medical characters who won the respect, confidence, and love of a public they delighted to serve.

We follow the career of a young girl of strong physique, independent disposition, and intellect above the average. Mary Putnam was one of a family of ten children. Once having made up her mind as to her future career, the profession of medicine, she never swerved from her object but bent all her energies, in spite of difficulties, not only to reach her goal but also to achieve a position of eminence in the medical field. After winning her medical degree in Philadelphia, she went to France and effected an entrance to the École de Médicine from which she finally won her degree, the first woman to achieve such a distinction in all the centuries of its existence. Returning to New York, Dr. Putnam became acquainted with Dr. Abraham Jacobi, who was a refugee from Europe.

Dr. Jacobi was received cordially by his medical colleagues, and in a comparatively short time was permitted to enter hospitals, clinics, and medical associations. Dr. Putnam, on the other hand, a descendant of the New England colonists who had stamped their character of tenacity and integrity on a new country, faced the petty hindrances reserved for those of her sex. She was, however, welcomed as a lecturer in the medical college of the New York Infirmary, and sometime afterwards was appointed a faculty member of the graduate medical school of the New York University College of Medicine as lecturer on children's diseases, and was also made a member of the New York Academy of Medicine. Strangely enough, almost the only group which obstinately refused to admit women members to its association was the Obstetrical Society.

Dr. Putnam-Jacobi assisted her husband to found the pediatric clinic at Mount Sinai Hospital, and had a busy private medical practice. She was also a housekeeper, and the mother of two beautiful children. In 1876 Dr. Putnam-Jacobi was awarded the Harvard Boylston Medical Prize, once won by Dr. Oliver Wendell Holmes.

In spite of a very active professional life, social questions and the enfranchisement of women claimed her attention. Dr. Mary helped to found The League

for Political Education, and her book, "Common Sense," as applied to woman suffrage was full of practical common sense arguments and was much to the point. The Doctors Jacobi lived active, useful lives, did great service to their country, and left behind professional reputations which will be long remembered with admiration and gratitude.

—Maude Glasgow, M.D.

A TEXTBOOK OF CLININCAL NEUROLOGY: With an Introduction to the History of Neurology. By Israel S. Wechsler, M.D., Clinical Professor of Neurology, Columbia University, New York; Consulting Neurologist, The Mt. Sinai Hospital, Montefiore Hospital; and Rockland State Hospital, New York. Seventh Edition. Pp. 801, with 179 figures. Price $9.50. W. B. Saunders Company, Philadelphia and London, 1952.

It is an especial pleasure for a neurologist who has used the book since 1928 to review the latest edition of Wechsler's textbook. It contains not only the information sought but also an index which guides one correctly. Though he has brought up to date the chapters on tuberculous meningitis, neurosyphilis, encephalitis, and cerebral aneurysm, the author has accomplished an unheard-of feat. After seven editions there is an increase of only fifteen pages!

The heart of the book consists of four parts entitled "The Spinal Cord," "Peripheral Nerves," "Brain," and "Neuroses." This textbook is in truth four in one. Included are, first, the examination of the nervous system including electromyography and the spinal fluid; second, the most modern psychologic tests for adults written by the author's brother, David Wechsler, Ph.D.; the section describing clinical manifestations of diseases of the nervous system; and finally, a history of clinical neurology.

More space could be given to infectious multiple neuritis which carries a high mortality rate and which, next to alcoholic neuritis, is the most common form. Carcinomatosis of the meninges and infectious mononucleosis involving the meninges and roots are often confused with multiple neuritis although these are not mentioned.

The muscular dystrophies are placed with the muscular atrophies under the heading "Spinal Cord." A separate heading, "Muscle," under which would come the dystrophies, myotonia atrophica, myotonia congenita, and myaesthenia gravis would be proper. Under this title it would be fitting to put muscle weakness with low serum potassium caused by nephritis or family periodic paralysis.

Included in the muscular atrophies is progressive spinal muscular atrophy, and under "Brain" is chronic bulbar palsy. These muscular atrophies due to degeneration of the motor nerve cells of the spinal cord and medulla are most confusing to the medical student and practitioner. Since they are part of the disease amyotrophic lateral sclerosis (a very poor descriptive name), one heading, "Progressive Muscular Atrophy," could include all three.

Only a man writing from great clinical experience could offer such a text to students and practitioners. It is concise, complete and well written. The publisher has contributed good paper, large print, and clearly reproduced illustrations.

—Madelaine R. Brown, M.D.

PRESCRIPTION FOR MEDICAL WRITING—A Useful Guide to Principles and Practice of Effective Scientific Writing and Illustration. By Edwin P. Jordan, M.D., and Willard C. Shepard. Pp. 112 with 26 figures. Price $2.50. W. B. Saunders Company, Philadelphia, London, 1952.

This manual, a guide to physicians in the preparation of medical articles for publication, treats the subject in chronological order. The discussion begins with the selection of the subject, the compilation of notes and references, and the preparation of the first draft. The next step is the process of revision, in which content, structure, and composition are checked; at least four revisions are considered necessary. Examples of the more frequently occurring errors are given. The importance of a suitable title and of an adequate summary is stressed. Special problems are considered, such as accuracy of references, proofreading, preparation of illustrations, and use of statistics and of tables. A list of references for further information is appended. This small volume contains a great deal of practical advice.

—Ada Chree Reid, M.D.

RHEUMATIC DISEASES—Based on the Proceedings of The Seventh International Congress on Rheumatic Diseases. Prepared by The Committee on Publications of the American Rheumatism Association, Charles H. Slocumb, M.D., Chairman. Pp. 449 with 126 figures. Price $12.00. W. B. Saunders Company, Philadelphia and London, 1952.

The reviewer of this book attended the International Rheumatism Congress held in New York City in 1949. It was well represented scientifically with the presentation of formal papers by experienced and well qualified rheumatologists from all over the world. In addition to the formal sessions, multiple simultaneous side conferences were held in many hospitals, which made it a physical impossibility to attend all of them.

The editors have published the important papers in their entirety. Others have been abstracted. Discussions of papers on controversial subjects are published, as well as discussion of the experiences of other practitioners that either added to or differed from a given presentation.

At this Congress, the historic and epoch-making announcement was made of the discovery of the antirheumatic effects of cortisone by Hench and Kendall. Copper salts was first presented to the American public as a therapeutic measure in rheumatoid arthritis by Forrestier of France, who first introduced gold salt therapy in 1926. The over-all problem of rheumatism in England is well presented by Lord Horder.

The book is arranged in a well ordered fashion and published as a semi-text. Besides having the papers grouped according to classic matter of etiology, pathology, bacteriology, and so forth, there is a very fine author and subject index so that the book can be utilized as a text by the student, research worker, general practitioner, and rheumatologist. The editors have done a splendid job and have been most conscientious in the presentation of the abstracts in that they conformed to the ideas of the authors and the text of their papers. Even to one who attended the Congress, this volume will make a valuable collection in the library, as it was impossible to attend all the conferences. So many aspects of the subject of rheumatology and arthritis are covered that it will appeal to the medical profession as a whole.

—Philip R. Trommer, M.D.

Just as we go to press, we have received from the Philippine Medical Women's Association a stimulating account of their activities. We regret we can not include it in this International Number of the JOURNAL, but promise publication in the very near future.

Current Publications of Medical Women

Gillette, Harriet E.: Common deformities in cerebral palsy. Arch.Phys.Med. **32:** 447-450, July 1951.

(From Aidmore Crippled Children's Convalescent Hospital, Atlanta, Ga.)

Discussion.

Macfarlane, Catharine, Sturgis, Margaret C., and Fetterman, Faith S.: Results of an experiment in the control of pelvic cancer. Am.J.Obst.& Gynec. **62:** 102-108, July 1951.

In the initial examination of 1319 white women, 30 to 80 years of age, presumably well, who came twice a year for pelvic examinations for five years, four pelvic cancers and 236 inflammatory lesions were discovered. At the end of 13 years, 666 women were still being followed twice a year by pelvic examination. Six additional pelvic cancers and 293 additional inflammatory lesions were discovered in the subsequent examinations. Only once was a pelvic cancer discovered in a single woman. The examining physicians and volunteers believe the time, effort, and expense involved was worth while. In retrospect the authors consider that vaginal smears in connection with periodic pelvic examinations might have shown the presence of cancer earlier in two cases. The study also seems to indicate that some of the cancers of the cervix might have been prevented by discovery and elimination of the inflammatory lesions of the cervix. The fact that the three early cancers of the cervix discovered on first examination of the 1319 volunteers occurred in areas of cervical erosion strengthened the opinion of the authors that inflammatory lesions of the cervix are areas in which cancer is prone to develop.

Dees, Susan C., and Lowenbach H.: Allergic epilepsy. Ann.Allergy, **9:** 446-458, July-Aug. 1951.

(From Departments of Pediatrics and Neuropsychiatry, Duke University School of Medicine, and Duke University Hospital, Durham, North Carolina.)

Thirty-seven children with convulsive disorders, with evidence of allergy, had both allergic and electroencephalographic studies. These patients had several of the following: a family or personal history of allergy, eosinophilia, positive skin tests, and no demonstrable organic brain disease. They were observed from one to eight years. Twenty-two had clinical allergy, 15 had no frank personal allergy. Occipital dysrhythmia was present in the electroencephalograms in 27 children (73%). Four case reports are presented in which control of allergy was accompanied by clinical and electroencephalographic improvement. The authors conclude that children with convulsive disorders, who also have evidence of allergy, merit trial of antiallergic measures in addition to and in conjunction with anticonvulsant therapy.

Brown, E. A., Fox, L. A., Nobill, C., Norman, P. P., Norton, R. C., and Ruby, Sylvia: The use of ACTH in the treatment of ambulatory asthmatic patients. Ann.Allergy, **9:** 459-464, July-Aug. 1951.

(From Allergy Department, Boston Dispensary Unit, New England Medical Center, Boston.)

Four cases are reported in detail to illustrate the typical course in patients taking ACTH therapy. All were over forty with asthma of more than ten years' duration and had not responded well to previous treatments. All showed immediate marked improvement, which was not lasting in one. Minimal injection amounts at intervals of 12 hours to two days kept the other three completely symptom free. These four patients are representative of 40 patients so treated. Careful follow-up reports at yearly intervals are necessary, however, for true evaluation of the effects of adrenocorticotrophic injection therapy.

Levin, S., and Moss, Selma: Repository penicillin injections in allergic children. Ann.Allergy, **9:** 471-476, July-Aug. 1951.

(From Allergy Clinic, Children's Hospital of Michigan, Detroit.)

Approximately 1,000 injections of repository penicillin were given to 226 allergic children, the average number of injections being four per patient. Several children received as many as 24 injections. These proved to be a valuable adjunct in the treatment of respiratory infections in asthmatic children. No important local or general sensitization reactions were observed other than one transient pruritic eruption in one patient. The clinical results using procaine penicillin G in oil or in aqueous suspension seemed superior to the procaine penicillin G in oil and aluminum monostearate. The low incidence of penicillin sensitivity may be explained in part by the relative infrequency of fungus sensitivity in younger individuals.

Rappaport, B. Z., Samter, M., McGrew, Elizabeth A., Hartley, Henrietta S., and others: ACTH in ragweed pollinosis; a histologic, immunologic and clinical study. J.Allergy, **22:** 304-313, July 1951.

(From Departments of Medicine, Pathology, Otolaryngology, and Allergy Unit, University of Illinois College of Medicine, Chicago.)

Nine of 26 ragweed sensitive patients who received 60 mg. ACTH daily for four days showed clinical improvement. None of the eight patients receiving placebo injections were improved. Neither the reagin titer nor skin sensitivity to ragweed pollen were altered by treatment with ACTH for the indicated period. Suggestive evidence was found that there is a correlation between the degree of skin sensitivity, the peripheral eosinophilia, and the tissue eosinophilia. No change in histologic characteristics attributable to the use of ACTH could be demonstrated. Edema and eosinophils in various stages of disintegration were found in pretreatment, post-treatment, and control biopsies.

Jones, G. E. S., and Delfs, Eleanor: Endocrine patterns in term pregnancies following abortions. J.A.M.A. **146:** 1212-1218, July 28, 1951.

(From Departments of Gynecology and Obstetrics, Johns Hopkins University and Johns Hopkins Hospital, Baltimore.)

Method for the study of women with reproductive problems is presented in an effort to clarify some of the etiological factors involved in such disorders. One hundred and twenty pregnancies were studied in women with abnormal reproductive histories. Repeated serum chorionic-gonadotropin assays, determinations of urinary pregnanediol, basal metabolism rate, blood cholesterol, blood sugar, dextrose-tolerance curves, and serum tocopherol, and analysis of husband's semem, in addition to the routine gynecologic type of investigation were made. Of 120 pregnancies, 48 resulted in abortion and 72 in delivery at or near term. The findings are discussed and therapy is evaluated.

Rubin, A., Winston, J., and Rutledge, Mary Louise: Effects of streptomycin upon the human fetus. A.M.A.Am.J.Dis.Child. **82:** 14-16, July 1951.

(From Department of Obstetrics and Gynecology, Section of Neuro-Otology, Department of Otolaryngology; and Department of Pediatrics, University of Pennsylvania, Philadelphia.)

Three women with active tuberculosis received streptomycin therapy during mid and late pregnancy, despite theoretical danger of damage to the fetus from the neurotoxic action of this drug. Prior to the birth of each infant, the mothers received 23 to 40 gm. Careful neurologic examinations repeated upon the infants at frequent intervals up to 1½ years following delivery revealed no evidence of damage from the drug. Although two infants were born prematurely (cause unknown), their general development has been normal to date. This limited experience fails to prove that the fetus is safe from possible neurotoxic effect of streptomycin when the mother receives the drug, but it suggests that such is the case.

Drake, M. E., Howard, Ann, and others: Treatment of juvenile thyrotoxicosis with propylthiouracil. A.M.A.Am.J.Dis.Child. **82:** 43-48, July 1951.

(From University of Maryland School of Medicine, Department of Pediatrics, Baltimore.)

Two girls (ages 8 and 11 years) were successfully treated for a period of 18 months. The initial dosage of the drug was decreased as the basal metabolic rate neared zero, and the final maintenance dosage was 25 mg. every 12 hours and every 8 hours on alternate days.

Cayley, Camille K., Caez, H. J., and Mersheimer, W.: Primary bronchogenic carcinoma of the lung in children; review of the literature; report of a case. A.M.A.Am.J.Dis.Child. **82:** 49-60, July 1951.

(From Departments of Pediatrics, Surgery and Pathology, New York Medical College, Flower and Fifth Avenue Hospitals, New York.)

The 16th proved case of primary carcinoma of the lung in a child is described. The patient had a very rapid course and unusual metastatic pattern. A plea is made for more cancer education among both physicians and laymen so that diagnosis of these rare and prognostically serious cases not only in adults but also among children can be made earlier.

Ralli, Elaine P., Leslie, S. H., and others: Studies of the serum and urine constituents in patients with cirrhosis of the liver during water tolerance tests. Am.J.Med. **11:** 157-169, Aug. 1951.

(From Department of Medicine, New York University College of Medicine and The Third [New York University] Medical Division, Bellevue Hospital, New York.)

The importance of the role of renal regulation of salt and water excretion as a factor in ascites formation in cirrhosis of the liver is becoming more and more apparent. The detailed water tolerance tests described here further emphasize this factor. Water tolerance tests were made in normal subjects and in patients with cirrhosis of the liver, without and with ascites. The capacity of the patients with cirrhosis to excrete ingested water was diminished. The authors suggest that renal regulation of salt and water excretion is in part, at least, under the control of antidiuretic hormone.

Bateman, Jeanne C.: A study of blood volume and anemia in cancer patients. Blood, **6:** 639-651, July 1951.

(From National Institute of Health, The George Washington University Cancer Clinic, Washington, D.C.)

Hematologic findings are reported in 33 patients with cancer, in eight patients with arrested cancer and in 10 patients without cancer. Blood volume was variable and seemed to bear no direct relation to the disease. Prolonged impaired alimentation due to dysphagia or apathy in three patients was associated with lower than expected blood volume. Recalculation of total hemoglobin on the basis of expected normal blood volume showed a reduction in hemoglobin concentration when blood volume is increased and conversely an elevation of hemoglobin concentration when blood volume is reduced. A marked increase above "normal" in blood volume was found in three patients who had received large amounts of stilbestrol. Withdrawal of the drug in the one patient observed resulted in reversion toward normal values. Testosterone increased body weight, total blood volume, and total circulating hemoglobin in three patients without active cancer. In two patients with far advanced cancer there was increase in weight, in one there was increase in blood volume, but in both there was progressive decrease in total hemoglobin.

Haglund, Greta: [Artane in paralysis agitans]. Nord. med. **46:** 1040-1042, July 4, 1951.

(From Med. avd. I, Södersjukhuset, Stockholm.)

The chemical composition and pharmacodynamic properties of Artane (Lederle) are described. Although similar to atropine, Artane is a synthetic preparation having only one-half the depressant effect of atropine on the vagus nerve. Various drugs used in paralysis agitans, comprising those of the atropine, the antihistaminic, and the curare groups are chemically described. Six cases are reported in which treatment with Artane gave fairly good results.

Loveless, Mary Hewitt: The influence of ACTH on the sensitizing and immunizing antibodies of inhalant allergy. Bull.New York Acad.Med. **27:** 495-509, Aug. 1951.

(From New York Hospital and Department of Medicine, Cornell University Medical College, New York.)

A definite increase in tolerance, as judged by clinical improvement and lowered conjunctival susceptibility, resulted from the use of ACTH in a young woman with chronic allergic eczema due to inhalant allergens. No shift occurred in cutaneous susceptibility. The various related factors in the increase in tolerance are discussed.

Wright, Joyce: Bacterial flora and bacterial counts of infants' bottle feeds. Brit.M.J. **2:** 138-143, July 21, 1951.

(From Research Laboratories, Hospital for Sick Children, Great Ormond Street, London.)

Bacterial flora and counts of 300 infants' bottle-feeds sampled in two children's hospitals, one infectious diseases, three residential nurseries, one out-patient department, and one infant welfare clinic were recorded. These are discussed and the dangers of bacterial contamination are pointed out. Recommendations are made for avoiding these dangers.

Pugh, Mary: Brightness perception and binocular adaptation. Brit.J.Ophth. **25:** 134-142, March 1951.

(From Institute of Ophthalmology, London.)

A patient can have a diminished sense of brightness in one eye which has normal visual acuity equal to that of the other eye. A marked loss of adaptability to differences of binocular light balance can be present in one eye in a patient with normal equal visual acuity in each eye. A marked loss of adaptability to binocular light differences is always present in an ambiyopic eye.

Tuttle, Esther: The biochemical approach to the treatment of chronic progressive diseases of nutritional origin; process therapy theory. Rev.Gastroenterol. **18:** 511-520, July 1951.

The process therapy theory of the etiological factors responsible for chronic progressive diseases of nutritional origin is postulated, using the biochemical blood values as indicators of biochemical dysfunctions associated with pathological conditions. The therapy based on the replacement of the process biocatalysts and the clinical results are described. The therapeutic results further substantiate the theory.

Daily, C. W., Austin, Elizabeth, Huddleston, O. L., and Bower, A. G.: Use of the rocking bed to augment ventilation in patients with poliomyelitis. California Med. **75:** 15-25, July 1951.

(From Department of Physical Medicine and the Communicable Disease Unit, Los Angeles County Hospital; Rancho Los Amigos; School of Medicine, University of Southern California, and College of Medical Evangelists.)

From clinical observations on 51 patients who were put upon the rocking bed—23 of them early in the course of the disease and 28 after they had been ill three months or more—it was concluded that the rocking bed is contraindicated for febrile patients with rapidly progressing disease and for those with atelectasis or urinary or pulmonary infection. It must be used with extreme care in patients early in the course of the disease who are not tracheotomized, because of a tendency toward increased accumulation of mucus and the danger of atelectasis. General guides were developed with regard to the use of the rocking bed for patients with post-acute poliomyelitis. Somewhat different rules were drawn for cases in which there is a respiratory problem. The rocking bed will give artificial respiration in cases of respiratory weakness but will not provide enough tidal air for the patient with paralysis of the muscles of respiration.

Shimkin, M. B., Bierman, H. R., Kelly, K. H., Lowenhaupt, Elizabeth, and Furst, A.: Trisethylene-iminostriazine (triethylene melamine or TEM) in the treatment of neoplastic diseases. California Med. **75:** 26-34, July 1951.

(From University of California School of Medicine, San Francisco.)

TEM produced minimal effects in inhibiting transplantable lymphoma and mammary adenocarcinoma in mice. In strain A mice, injection of the compound induced pulmonary tumors; TEM was tried on 32 patients with neoplastic disease, including 9 with Hodgkin's disease and 5 with lymphosarcoma and lymphatic leukemia. The therapeutic and toxic effects were similar to those observed with nitrogen mustard (HN2). Satisfactory remissions of up to three months were observed in Hodgkin's disease and lymphosarcoma following parenteral administration of TEM. It is the author's impression that the remissions were not as complete and did not last as long as those obtained with HN2. The ease of administration of TEM increases its hazards and close clinical hematologic observations are essential.

Steffen, Elizabeth A., and **Ashton, Dorothy L.:** Low spinal for delivery using Procaine or Pontocaine. Wisconsin M.J. **50:** 673-677, July 1951.

(From Obstetrical Service, Woman's Hospital of Philadelphia, and Racine Hospitals.)

The results of 1,000 vaginal deliveries by low spinal using Procaine or Pontocaine are described. This where properly administered was found to be a safe, effective anesthetic with advantages to the mother, infant and obstetrician.

Rosemond, G. P., Boucot, Katharine R., and Aegerter, E.: Solitary pulmonary adenoma (focal pulmonary adenomatosis): a three-year follow-up after resection. J.Thoracic Surg. **22:** 99-103, July 1951.

(From Philadelphia Tuberculosis and Health Association.)

A case is reported in a 16-year-old boy. There was an asymptomatic course, a long preoperative roentgenographic observation, and no recurrence over a three year postoperative period.

Stroebel, C. F., Hall, B. E., and **Pease, Gertrude:** Evaluation of radiophosphorus therapy in primary

polycythemia. J.A.M.A. **146:** 1301-1307, Aug. 4, 1951.

(From Division of Medicine and Division of Clinical Laboratories, Mayo Clinic, Rochester, Minn.)

A study of 199 patients with primary polycythemia prior to radiophosphorus therapy revealed several "types," which are described. Data on 32 patients with primary polycythemia treated with means other than radiophosphorus and the cause of whose death is known, shows a very high incidence of death from vascular accidents, tending to occur within the first decade. From adequate posttreatment information of 148 of the original 199 patients it was found that there was a decided reduction in the incidence of vascular accidents. The authors conclude that radiophosphorus therapy is successful in producing remissions of more than one year's duration in three-fourths of the cases. Simple polycythemia was successfully treated in 90% of the cases. The occurrence of leukemoid reactions of hyperuricemia in types manifesting some degree of panmyelopathy was responsible for some reduction of the incidence of success.

Lowbury, E. J. L., and Topley, Elizabeth: Pseudomonas pyocyanea in burns; its role as a pathogen, and the value of local polymyxin therapy. Lancet, **2:** 137-147, July 28, 1951.

(From Medical Research Council's Burns Research Unit, Birmingham Accident Hospital.)

Local application of 0.1% polymyxin-E cream every other day to burns colonized by Ps. pyocyanea in a controlled trial reduced the incidence of this organism significantly. Routine local application protected burns from colonization by Ps. pyocyanea and some coliform bacilli. Of 162 burns treated with polymyxin, 7% acquired Ps. pyocyanea as compared with 24% of 207 control burns. Local polymyxin E was used for 6 weeks on all burns with no local or general toxic effects. During this period the load of infection in the ward was considerably reduced. The use of polymyxin in the controlled prophylactic trial was associated with a significant reduction in the healing time of full thickness of skin-loss burns. There was also a significant increase in the incidence of complete graft takes, and a slight reduction in the incidence of anemia, pyrexia, and death. These and other data provide evidence that Ps. pyocyanea and some coliform bacilli act as pathogens on burns. The case is presented for routine use of polymyxin combined with penicillin in the local treatment of burns.

McCorriston, Lila Redmond, and Roys, H. C.: Atrophia maculosa varioliformis cutis. A.M.A.Arch.Dermat.& Syph. **64:** 59-61, July 1951.

(From Department of Dermatology and Syphilology, New York University Post-Graduate Medical School, and Skin and Cancer Unit, University Hospital.)

A case of idiopathic atrophy of the skin of the face is reported. The history, course, and varioliform and linear scars are suggestive of Heidingsfeld's atrophia maculosa varioliformis cutis.

Mann, Ida: A further report on exophthalmic ophthalmoplegia and its relation to thyrotoxicosis. Am.J. Ophth. **34:** 960-976, July 1951.

The signs of excess thyroid include loss of weight, rapid pulse, raised basal metabolism rate, soft moist skin, lid retraction and lag; while those of excess pituitary thyrotropic hormone consist of orbital, lid, and conjunctival edema and infiltration; and hence, proptosis, ophthalmoplegia, fundus changes, and loss of visual acuity. Deficiency of thyroxine shows itself as a gain in weight, a low basal metabolism rate, thick coarse skin, and slow pulse. These various signs and symptoms must be evaluated in the diagnosis and treatment of proptosis associated with endocrine imbalance. Nineteen new cases and 18 previously reported are reviewed.

Munoz, Eloisa, and Mirabel, E.: Weil's disease in children. Bol.Assoc.med.de Puerto Rico. **43:** 219-222, April 1951.

(From Pediatrics Service, San Juan City Hospital.)

The findings in seven cases of Weil's disease are described and discussed. Chloromycetin seemed to yield good results in the treatment of this, but the number of cases is too small to reach any conclusions.

Swallow, Kathleen A., and Chute, A. L.: NPH insulin —a preliminary report. Canad.M.A.J. **65:** 23-25, July 1951.

(From wards and laboratories, Hospital for Sick Children, and Department of Paediatrics, University of Toronto.)

In 10 of 18 juvenile diabetic patients, as good or better control was achieved by a single injection of NPH insulin as was possible with the double injection of unmodified insulin and protamine zinc insulin. In six children a mixture of unmodified insulin and NPH insulin given in a single injection gave satisfactory control of hyperglycemia. Generalization regarding NPH should not be applied to individual patients. Each must be treated according to his needs.

MacGregor, Agnes R.: Tuberculosis in a general children's hospital; a pathologist's experience. Edinburgh M.J. **58:** 248-256, May 1951.

The author reviewed the autopsy records at the Royal Edinburgh Hospital for Sick Children for a 14-year period, from 1934 to 1947. During this period, 2,559 autopsies were carried out on children under 12 years of age. Tuberculous lesions were found in 355 cases (about 14%). In 324 of these (about 12.5%) tuberculosis was the cause of death. In 31 cases (1.5%) the tuberculous lesions were an incidental finding when death was due to another cause. The author gives the age and sex incidence and describes the sites of primary lesions and the character of the lung lesions. Progress of the disease and other pathological findings are also described in some detail.

Owen, J., McGowan, J., Owen, Catherine, and Sergent, W.: Brachial plexus block for surgery of the arm. J.Kentucky State M.A. **49:** 323-329, Aug. 1951.

(From Anesthesia Department, St. Joseph Hospital, Lexington, Ky.)

The authors used brachial blocks almost exclusively during the past two years in all cases involving surgery of the arm. Of 255 blocks done, 48 were on children under 15 years of age and 35 on patients over 60. Brachial block is as useful for surgery of the upper extremity as spinal anesthesia is for surgery of the abdomen and lower extremity. It can be used for patients of all ages from infancy to old age, and proves most valuable in the presence of almost all varieties of diseases and injuries.

Speert, H., Quimby, Edith H., and Werner, S. C.: Radioiodine uptake by the fetal mouse thyroid and resultant effects in later life. Surg.Gynec.&Obst. **93:** 230-242, Aug. 1951.

(From Departments of Obstetrics and Gynecology, Radiology, and Medicine, Columbia University, New York.)

Pregnant mice were injected with single doses of radioiodine at various stages of pregnancy. Specific pathological changes occurred in the thyroids of the offspring. The use of radioiodine in the treatment of pregnant human patients after the first trimester is considered unwise in the light of present knowledge, if the therapeutic objective can be attained by other methods of treatment.

Ducommun, P., Timiras, Paola S., and Dordoni, F.: Hemoglobin spreading test during pregnancy. Surg. Gynec.& Obst. **93:** 243-245, Aug. 1951.

(From Institut de Médecine et de Chirirgie expérimentales, Universite de Montreal, Montreal, Canada.)

The spread of subcutaneously injected hemoglobin was investigated during pregnancy in the rat. The inhibition of the spread was seen to be very high during the first and third period. The use of this test is suggested for clinical purposes.

Gordon, Vida H., and Marvin, H. N.: Theca-cell tumor of ovary in child one year of age; with review of the literature. J.Pediat. **39:** 133-143, Aug. 1951.

(From University of Arkansas School of Medicine.)

The diagnosis in this case was based on the presence of intracellular and extracellular lipoid droplets containing birefringent granules, and large amounts of reticular fibrils. Preoperative vaginal smears had revealed cornified epithelial cells comparable to those of women at the midinterval of the menstrual cycle. Late postoperative vaginal smears showed regression of vaginal epithelium to the infantile condition. This case supports the view that an ovarian tumor can produce femininzing characteristics and contain by far a major portion of theca-cell rather than granulosa-cell element.

Graves, Fay B., and Ball, W. O.: Evaluation of the treatment of primary atypical pneumonia with aureomycin, chloromycetin, and terramycin. J.Pediat. **39:** 155-167, Aug. 1951.

(From Pediatric Hospital, 24th General Dispensary, Bad Mergentheim, Germany.)

A series of 143 patients with atypical pneumonia treated with aureomycin, chloromycetin, and terramycin is evaluated. Terramycin is felt clinically to be the drug of choice in the treatment of atypical pneumonia in infants and children. Attention is called to the severity of the disease in infants. The occurrence of afebrile cases of atypical pneumonia is discussed.

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EDITORIAL FORECAST

August 1952

"Diagnosis of Hip Diseases in Children," by Mary S. Sherman, M.D., Assistant Professor, Department of Surgery, Division of Orthopedic Surgery, University of Chicago.

"Nervous Tension and the Climacteric," by Nadine R. Kavinoky, M.D., a member of the faculty, Department of Gynecology, College of Medical Evangelists, Los Angeles.

"Hemorrhage and Hemorrhagic Shock," by Esther M. Greisheimer, M.D., Professor of Physiology, Temple University School of Medicine.

In the Problem Clinic will be a timely article, "How Can the Internship Be Made More Effective?"

The Message from the President will give a brief report of the important happenings of the Annual Meeting in June, the full account of which is scheduled for publication in the September JOURNAL.

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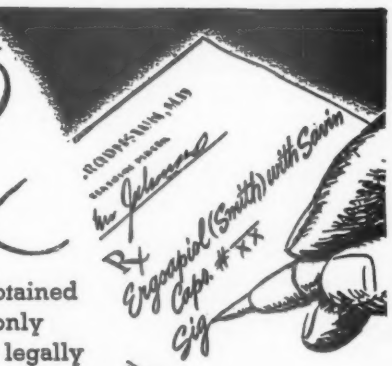

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Scientific News Notes

ELI LILLY announces a new antihistaminic combination *Pyronil* (Pyrrobutamine, Lilly) which is said to have a longer duration of effect than that of any other known antihistaminic.

* * *

CHAS. PFIZER & CO., INC. has announced the release of the anti-tuberculosis drug, *Cotinazin* (isonicotinic acid hydrazide). Bacitracin for parenteral use and sterile bacitracin powder for topical use have just been placed on the market by Chas. Pfizer & Co., Inc. Bacitracin has a therapeutic spectrum closely resembling that of penicillin, both are effective against gram positive bacteria. Bacitracin is said, however, to combat some infections caused by organisms resistant to penicillin therapy. Cures or marked improvement of acne, eczema, and impetigo in 63 of 68 cases treated with terramycin ointment and, in some cases, with terramycin given orally, have been reported by Dr. Frederick Reiss, associate clinical professor of dermatology and syphilology at the New York University-Bellevue Medical Center.

* * *

THE UPJOHN COMPANY is increasing the production of cortisone by a new fermentation process, resulting in reduced production costs. These savings are passed along to the consumer as Upjohn's cortisone is now available at 20 percent below the prevailing price of approximately $30 per gram.

* * *

ABBOTT LABORATORIES announce a new product, *Hyazyme*, trade name for hyaluronidase, an enzyme which accelerates the diffusion and absorption of subcutaneously injected fluids and drugs. *Hyazyme* is a white lyophilized powder which becomes a clear solution when dissolved in water for injection or normal saline solution. It is odorless and tasteless. Other new products are *Sulestrex* Piperazine Sub-U-Tabs (Piperazine Estrone Sulfate, Abbott), and *Sulestrex* with Methyltestosterone Sub-U-Tabs (Sublingual Tablets, Abbott). These tablets are water-soluble. Estrogens absorbed from the sublingual and buccal mucous membranes enter the systemic circulation and are carried directly to the destined organs, bypassing partial inactivation of the liver. Abbott Laboratories also announces *Gemonil* (Metharbutal, Abbott), a synthetic drug, 5,5-Diethyl-1-methylbarbituric acid, which is indicated in the treatment of grand mal, petit mal, and myoclonic epilepsy and in mixed types of seizures.

WINTHROP-STEARNS INC. has introduced to the medical profession a new radiopaque compound for diagnosis of gallbladder disorders, *Telepaque*. This compound in tablet form follows extensive clinical testing and facilitates the diagnosis of gallbladder conditions by making the gallbladder more opaque and more clearly visible in X-ray pictures. This company has also made available to the medical profession a new pharmaceutical preparation, *Katonium*, useful in the treatment of diseases characterized by excessive sodium and water retention. *Katonium* is a synthetic cation exchange resin, a therapeutic combination of ammonium and potassium polystyrene sulphonate in fine powder form. It is insoluble, non-absorbable, non-toxic, and virtually free of any local irritant action on the gastrointestinal tract. Winthrop-Stearns Inc. reports that vitamin B12 and folic acid have been added to its multiple vitamin preparations, *Pluravit* and *Pluraxin*. *Neocurtasal Iodized* has been introduced as an iodinated salt substitute for use in low-salt and sodium-free diets. It was developed as a supplement to Neocurtasal previously introduced by this company.

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SCHERING CORPORATION announces a new supply of cortisone, *Cortogen*, their brand name of cortisone acetate. Shering's continuous research on this hormone has made possible new production methods that yield treatment for one patient for 20 days from the bile of only 2 cattle instead of the 400 needed in 1949. The company independently developed its own processes of manufacturing cortisone. Schering also is supplying *Ditubin* (isonicotinic acid hydrazide), a new anti-TB drug, in quantity. Extensive clinical testing abroad has resulted in a large demand for this drug in South and Central America as well as in Europe and Asiatic countries.

* * *

AYERST, McKENNA & HARRISON, LTD. have just released *Bemocin* capsules, a formula providing massive dosages of oxytropic B factors and ascorbic acid together with hemopoietic, lipotropic, and other factors of the B group of vitamins.

* * *

E. R. SQUIBB AND SONS announce that the new antituberculous drug *Nydrazid* is available to physicians for unrestricted purchase. It is reported that this product, a new, orally active compound for use in tuberculosis, has greater vitro potency against the tubercle bacillus than any other agent at present available.

physiologic correction for corpus luteum failure

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Whether a deficiency of corpus luteum hormone presents as spontaneous abortion, metrorrhagia, functional dysmenorrhea, or premenstrual tension, it may be corrected *physiologically* by PROLUTON and PRANONE. PROLUTON (pure progesterone) is administered intramuscularly or as Buccal Tablets. PRANONE (ethisterone) is administered as tablets. Both PROLUTON and PRANONE aid development of a normal endometrium essential for uninterrupted pregnancy and normal menses.

ROLUTON ® (Progesterone U.S.P.) in oil for intramuscular injection.
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the most complete line of single-dose antibiotic disposable cartridges

Steraject Penicillin G Procaine Crystalline in Aqueous Suspension (300,000 units)

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2 cartridge sizes | *for only 1 syringe!*

Steraject Combiotic* Aqueous Suspension (400,000 units Penicillin G Procaine Crystalline, 0.5 Gm. Dihydrostreptomycin)

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two cartridge sizes permit *full standard* antibiotic dosage

cartridges individually labeled

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